



A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

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## BEAUTIES OF THE CORN PALACE.

In all that has been written of Sioux City's famous Corn Palace in whatever light it has been discussed, the predominating thought of all who have read it has been a surprising beauty. No cut, no photograph, no pen picture nor description can give an idea of its absolute brightness, uniqueness and beauty. The wonderful combinations of green and golden, of orange and of yellow, were never equaled in the artistic work of man. And herein, perhaps, lies the chief charm of the Corn Palace; and that the magnetic attraction which brought thousands of people from long distances to see the Palace of 1887, and will bring hundreds of thousands to view the Palace of 1888, for it is the glorious work of Nature, supplemented by the cunning handicraft of man, which serves to delight the eye and send the blood bounding more joyfully through the veins at sight of such marvelous splendor. The old saying that "God made the country and man made the town" may without profanity be paraphrased in speaking of Sioux City's Corn Palace—God and man worked hand in hand in its building.

The glories of the Corn Palace, however, as far as have been described, are necessarily in the past tense. The Corn Palace of 1887 was grand, beautiful and inspiring; in the light of experience and increased enthusiasm the Corn Palace of 1888 will be incalculably more grand, more beautiful, more inspiring. It will be built on a grander and more elaborate scale; it will contain all the good and successful features of the Palace of 1887, together with all the new effects which experience and the taste of its architect, builders and decorators can suggest. Aside from its significance as an example of the boundless agricultural resources of the Northwest, it will have a refining and educating influence; it will be a thing of beauty and a joy forever to all who see it; it will go far toward proving to the world that the people of the West have a gentle and artistic taste, not the less gentle and artistic because we are near to Nature's heart.

The Corn Palace will open Sept. 24, and close Oct. 6, 1888.

The shipments of wheat from San Francisco to French ports have largely increased of late. So far this crop year these shipments have exceeded by more than 50 per cent. those to Great Britain.

## BUILDING OF ELEVATORS.

### FOURTH PAPER.

BY R. JAMES ABERNATHEY.

We have already described a small elevator for ordinary country handling of grain, with sufficient minuteness and accuracy to enable almost any person desiring to build such a house to do so with but little trouble. A good mechanic, one that is at all familiar with such work

built, usually small in size and crude in architectural form, to start with. As those towns grow and improve, a better class of building takes the place of the old, and a better class of mechanics are induced to go there. It very often occurs, however, that an elevator is among the pioneer buildings of a town, and must be erected with or without the aid of its pioneer mechanics. The fact though should not be overlooked that but few carpenters can take a written description and successfully build an elevator. If such be trusted with a job of that kind, as well as being fairly skillful with his hand, he should have rare good judgment and a mechanical head.

It does not require much of a head to build a one-story frame house set up on blocks, nor will it tax his skill to any extraordinary degree if the house should be made two stories high and mounted on wooden blocks. A two-story house, business or residence, so mounted is generally regarded as quite an addition to the material development of a new Western town, and an ornament as well. A few such entitles the town to be ranked a city, to be called which is the overshadowing ambition of every rural center of population in the boundless West.

If a practical millwright can be obtained, he is the proper person to place in charge of the erection of a grain elevator, provided he is a millwright in fact as well as in name. His mechanical training and education better qualifies him for such an undertaking, even though he has never seen an elevator. A millwright is, or should be, a mechanic, and able, with reasonable instructions, to adapt himself to almost any kind of a mechanical job, which the building of an elevator really is.

But to return to the subject proper, we will proceed to make some alterations to the house already built (on paper) so as to further enlarge its usefulness. The main building will, perhaps, continue to answer

all purposes for handling, shelling, cleaning, etc., but we may want a little more dump room. In seasons when corn comes in slowly it does not always pay to keep steam continuously, and ready to start up every time a wagonload of corn shows up. And in towns where there are two or more grain buyers and elevators, that has to be done, unless there are other means of taking care of the corn promptly. If not, the neighboring buyer, who is prepared to receive the stuff, will get it. The farmer may have his preference among the dealers, other things being equal, but his loyalty is rarely of sufficient buoyancy and in-



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THE SIOUX CITY CORN PALACE,

in a general way, certainly ought to be able to take the written description and proceed to plan and build, without experiencing any difficulty whatever. It would seem, also, that a fairly good mechanic could, with the lesson given, intelligently plan an elevator of any given size and for any special or for all purposes.

But the trouble is, that in many localities where elevators have to be built there are no mechanics, or at least very few, and they are simply ordinary house carpenters, which the developments of the great agricultural districts of the West bring to spots where little towns are to be



tensity to cheerfully undertake the task of shoveling a load of corn into a high crib, when he can dump it at the next house. The average Western farmer is not built in that way; he is unaccustomed to protracted periods of severe exertion. In consequence of that fact, the average elevator man ought to be prepared for emergencies of that sort.

Instead of building a crib out in the lot somewhere, to be shoveled in and out of (it must be remembered that, while the farmer may shovel the corn into the crib, the elevator man must pay for shoveling it out, which adds to the cost of the cereal), let the driveway be extended from the driving-off end, as far as there is room, or as far as may be desired, and the crib placed beneath it. It is not necessary that the driveway be any higher for that purpose than has already been described, but the higher it is the more corn it will hold. That little fact might as well be kept in view, and if it be the intention to build in that way the driveway should be made as high as it is convenient to make it. If the ground slopes upward from the track very abruptly, it is easy to get a high driveway. The earth beneath the driveway can be removed down to a level with the track, providing the sheller is down in a pit, as previously indicated; if not in a pit it will not be necessary to dig so deep. In a case of this kind, to increase the holding capacity of the dump crib, the driveway can be made double width, so that two teams can drive in abreast. For that purpose it would have to be 20 to 22 feet wide. Two lines of dumps can then be set in the floor, quite close to each other. It must not be expected that all the dumps can be occupied or used at one time, as one team will occupy two at a time, the horses or mules will be standing on one, while the wagon is on the other, but every other dump in the line can be used simultaneously, and the sets operated alternately. The object in having the dumps close together is to fill the dump crib the whole length without having to get into it to shovel.

Starting about over the sheller and just inside the wall of the building, commence with a drag-box and run it back to the further end of the driveway extension. The top of the drag-box will be the level of the floor of the dump crib, which can incline slightly upward, as it goes back, just enough to make shoveling the corn to the drag comparatively easy when the crib is to be emptied. It must not incline sufficiently for the corn to all run into the drag, because with such a great width the holding capacity of the crib will be materially lessened. A great part of it will run in, and the balance is easily shoveled in. The crib must not interfere with the dump hopper proper, which has already been described, but must be independent of it. The original arrangement must be left just as it is, so that dumping and shelling can go on without the use of the drag. The crib is an addition to be used when the sheller cannot run, and the drag to transfer corn from crib to sheller when it does run.

The extended driveway and crib must of course be closed in and roofed over; and while that is being done it is very convenient to extend an addition of two stories in height from the end of the elevator, and the same width to the further end of the lengthened driveway. The upper story of the addition, the floor of which will come a little below the floor of the driveway, can be divided into convenient sized bins for the storage of various kinds of grain other than corn or wheat.

If the drag is made with the view of conveying loose grain, as well as ear corn, the upper bins can be emptied into the drag and conveyed to the main building for cleaning, weighing and loading out. These bins will have to be filled mostly by shoveling out of the wagons or emptying from sacks, as the case may be.

We dislike to make any arrangements whereby the burdens of the politically and otherwise oppressed farmers are made greater, but we have the room there, it is convenient and comparatively inexpensive to utilize it, and must ask them to bear with us, in consideration of the fact that we have done much to relieve the hard and difficult task of shoveling ear corn, and will do more before we get through with the job.

The lower floor of the addition, which should be about on a level with the car floor, can be used for general storage purposes, such as sacks of flaxseed, beans, peas, potatoes, or anything else for which it can be made useful. All such goods can be easily loaded into cars on the side track without being transferred to the main building. Where flax is handled in large quantities it will probably be desirable to run it through the separator in the main building, but if not in large quantities it should be cleaned slowly by a hand machine, on the floor of the store room,

as a generally better job of cleaning can be made in that way than with an ordinary grain separator, such as is used for cleaning coarser seeds and cereals.

The method of driving the drag belt will have to be determined by circumstances. With the machinery arrangement already described, a right-angle counter shaft connected with the main shaft in the basement will have to be added, for driving which a pair of small bevel wheels may have to be used. Well constructed bevel friction wheels will do the work without noise or racket, such as cog wheels would make, and would not be subject to so much wear and tear.

To further aid in the automatic handling of ear corn, a crib can be run from the forward end of the driveway at right angles to it. To utilize it, a stand of elevators with buckets 16x8 must be run up just outside the driveway to about the same height as those in the main building, and the dump hopper on that side of the driveway, instead of being made to discharge into the sheller, should be so constructed as to discharge into the boot of the new stand of elevators, and also both hopper and elevators so arranged that a drag belt running from the proposed crib can get past them and empty into the hopper that feeds the sheller. The length of the crib will have to be determined by the distance the corn will run from the head of the elevator. The width may be from 20 to 25 feet, and an ordinary height at the further end. The bottom should have a gentle slope both ways, to the center, where the drag belt will be located, and running the full length of the crib.

A spout of sufficient size must be run from the head of the elevator to the far end of the crib, with pitch enough to insure the corn to run easily but not rapidly. Along the main spout, at proper intervals, branches must be run out for the purpose of distributing the corn in the crib. To operate it, fill the far end first, then cut off the flow of corn in the main spout at the first branch spout from the far end, and open the branch spout and fill the crib at that point, and so continue until the crib is full. It will be noticed that, as the building is approached, the crib can be made higher, and in that manner a very large quantity of corn piled up in it.

The dump hopper must be so constructed as to discharge carefully into the buckets of the elevator as they go up; then no trouble will be experienced in elevating the ear corn. The drag belt can be driven direct from the shaft in the basement, by providing a narrow passage way between the dump crib and the dump hopper, that feeds the sheller.

### THE RUSSIAN GRAIN TRADE.

Interesting revelations concerning the Russian grain trade are made by Mr. Wodehouse, the British Vice-Consul at the Black Sea port of Nicolaieff, in a recent report to the Foreign Office, which has been transmitted to the Agricultural Department.

From this it is learned that the grain crops in nearly the whole of the Governments of Southern Russia were exceptionally abundant last year, so that the shipments from Nicolaieff were unusually large.

The quality of these crops was very good, and the majority of the cargoes being shipped in the autumn in excellent order, purchasers abroad were led to believe that these first shipments were reliable samples of the immense stock remaining in the country at the close of the shipping season, and which would be ready for exportation on the reopening of navigation in the spring.

Unfortunately, however, this belief was not justified. No provision had been made for warehousing such a large crop. For want of rolling stock and of proper management on the railway, masses of grain accumulated at the various stations, and remained there month after month during the winter, exposed to rain and snow, without covering of any description. The weather of the late autumn and winter was particularly bad, and the condition of much of the grain was most deplorable when it eventually reached Nicolaieff. But part of it which was not wholly unfit for market was more or less damaged, and it is stated by Mr. Wodehouse that it was "nothing unusual to see truck loads of sacks covered with a green growth, the grain having sprouted through the meshes of the sacking."

A description is given of the manipulation of this damaged grain by Mr. Wodehouse, who first shows that it is the custom for speculators to buy grain from the farmers, small proprietors, and peasants. Their transactions are purely speculative. They buy everything that is offered, making from a number of small lots large parcels, which they then offer to corn merchants.

These merchants also have staffs of agents employed in collecting grain in different parts of the country. Besides these there are numerous brokers who make it their business to ascertain daily what stocks of grain are in the hands of the speculators, and, armed with this information, they instruct the merchants, who operate accordingly. Or the merchants, having orders from abroad, employ these brokers to get together the cargoes they require.

When in the merchants' hands the grain passes through a series of processes. First, if it is damp, it is moved about frequently, with shovels, day after day, until it is considered to be dry enough for shipping. When practicable it is moved about in the open air exposed to the sun. In wet weather the drying process is indefinitely prolonged, and if the grain is very damp there is danger of its heating.

Next comes the mixing or "bulking," which requires all the "intelligence and ingenuity of the faculty." Light grain is mixed with heavier qualities, and these are worked well together. If a better quality is needed the lighter grain is extracted. Very frequently the mixing is effected during the loading, the quantity required to make up a cargo consisting of a number of parcels, some of which may still be in the warehouses of the speculators, or in lighters.

Damaged grain may pass as such from hand to hand in the country, but in the end there is but one outlet for it. When a merchant has large stocks it is not difficult for him to hide away, as it were, small lots of inferior or injured grain. This is done every day, according to Mr. Wodehouse. In the general manipulation this goes in with the rest. If not mixed with other grain in the warehouses, it is spread over a cargo during the loading.

Sometimes it is not possible to manipulate grain and move it about and air it in the manner described. Unfavorable weather and the want of warehouse room cause difficulties which the merchants cannot surmount, as in the spring of this year when the wet and damaged grain came pouring in from the interior, with the result that some of the grain must be shipped just as it is, at the risk of injuring the grain with which it is mixed.

In these circumstances it is not strange that there was a great inferiority in the grain shipped this spring as compared with that shipped in the autumn. Much of the former, Mr. Wodehouse says, must have been shipped in a perilous condition, for, owing to the heavy falls of snow and rain during the autumn and winter, and the wet weather in the spring, all grain, however well cared for, became more or less damp, and it is certain that most of the cargoes in March and April contained a certain amount of moisture, which must have had a tendency to affect the quality of the grain.

If in addition to this any really wet stuff was mixed with the grain, already in a damp state, such cargoes must necessarily have suffered considerably during a voyage of nearly twenty days, in part of which they were exposed to the comparatively higher temperature of the Mediterranean Sea.

Mr. Wodehouse adds: "I do not mean to say that all the spring-shipped cargoes were so damp that there was actual danger of their becoming seriously injured, but it is well known that certain of them, one of which was a well identified cargo of barley, did arrive at their destination in a badly heated condition, and such being the case, it may naturally be concluded that they were not as they ought to be when they left Nicolaieff."

"Looking at the way in which cargoes of grain are put together, I consider the system highly reprehensible; as it is, receivers of grain are entirely in the hands of the shippers, who are free to load anything they think proper; and this state of things will continue unless steps are taken to establish a method of surveying and sampling the grain at the place and time of shipment. Our merchants at home would do well to give this matter their serious consideration, and without loss of time."

Vice-Consul Wodehouse speaks only of what is done at Nicolaieff with respect to the manipulation of wheat, but the same system no doubt holds in all of the Black Sea ports, from which enormous quantities of grain are shipped.

From Nicolaieff, however, there are no small exportations of grain, as it will be seen from this report that 562,630 tons of grain were brought to the principal group of warehouses situated at Popovia Balka, in close proximity to the commercial port, between the months of January and June in the present year. Besides this, there are four other groups of warehouses at Nicolaieff which receive grain for shipping, brought in by carts from the surrounding districts.—*North British Agriculturist*.



## STILLWELL'S PATENT LIVE STEAM FEED WATER PURIFIER.

Users of steam have learned by experience the difficulty of meeting all requirements in the way of feed water heating and purifying, by the use of any one machine. The Stillwell Open Heater, using exhaust steam, is an efficient and widely known device, thousands of which are in use; and is probably as satisfactory a machine as can be devised with the use of exhaust steam. Where the water contains only carbonate of lime and magnesia, the open heater will give very general satisfaction; but in many cases the water contains sulphates of lime and other impurities, to precipitate which requires a much greater degree of heat than can be obtained with exhaust steam. In such instances, the work can be effectually accomplished by following the Open Heater with the Live Steam Purifier to complete the work of purification. However, in many instances it is impracticable to use an exhaust steam heater and to meet such cases and the requirements just mentioned the Horizontal Live Steam Purifier shown on this page was expressly designed, whose construction and operation may be briefly described.

As will be observed in the engraving, it is a horizontal cylinder, made of best steel boiler plate, and may be placed in any convenient locality above the boilers to be supplied and with which it is directly connected.

The cold water, or water from exhaust heater, is introduced at *A* through a pipe connected by tee with a horizontal pipe inside the shell. Both ends of this horizontal pipe are perforated with many small openings, through which the water escapes in the form of a shower. Live steam is admitted at *B B*, filling the purifier with steam at boiler pressure. The water falls from the induction pipe through a body of steam into the top of two series of shallow iron pans, each pan being one-half the length of the purifier shell. These pans are provided with openings in the bottom at alternate ends, and the water is compelled to traverse their entire area in a thin sheet. As the heat and pressure in the purifier is the same as in the boilers, the water, in its passage over these pans, is subjected to the same chemical change as in ordinary boilers, and is relieved of all scale-producing impurities, which are precipitated upon the surface of these pans, from which they can be quickly and easily removed. After passing the circuit of the pans, the water drops into the large settling chamber *D D*, in the bottom of the purifier, where the non-crystallized impurities deposit in the form of slush or mud, and are blown off at frequent intervals through the blow-off *F*. To complete the work of purification, the water passes through the filtering chambers *E E*, which are filled with coke or other suitable material into the pure water chamber, then into the boiler through pipe *A*.

It is claimed that the feed water is then absolutely pure, and at substantially the same temperature as the water in the boiler, thus effectually preventing the deposit of sediment in the boilers, and the strain upon the boiler incident to the introduction of water at a low temperature. Each end of the purifier is provided with a heavy head fastened in place with cap screws. The depositing pans slide on ways which are fastened to the shell, and can easily be removed through either end of the shell for cleaning, and any impurities which may attach to the bottom of the purifier shell can readily be raked out, as removing the head exposes the entire inner structure. The manufacturers of this purifier are STILLWELL & BIERCE MANUFACTURING CO. of Dayton, Ohio, who are well-known to the steam-using public in connection with heating and purifying apparatus. They manufacture this purifier in a variety of styles and sizes to meet the varying requirements of the trade, and will be pleased to correspond with interested parties with reference thereto.

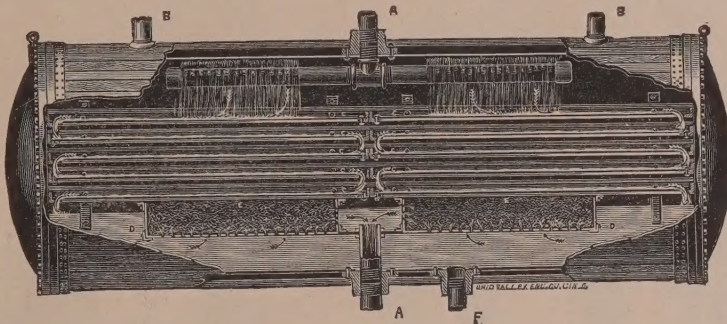
Prime writes: "There never has been a season in the history of Illinois when the demand for threshing machines has been so great and the supply so totally inadequate. One of the peculiar features of the winter wheat crop this season is that its value for flour in the very best wheat producing states is less than half that of last year. The Iowa oat crop is very disappointing, both in quantity and quality. Nebraska oat crop has fallen from 30 to 40 per cent. in yield from expectations before threshing commenced."

## SPECULATORS AND SCALPERS ON THE BOARD.

Most of the active members of the Chicago Board of Trade do business for somebody besides themselves. They are commission men. They get a certain fraction of a cent for every bushel of grain or pound of meat they buy or sell for their customers. There are some chances for loss, but it is generally a rather safe and profitable business—for the commission man. But there are several hundred gentlemen on the Board who risk their own money on the fluctuations of the market. To the man who thinks of grain speculation as an easy way to make a living, and perhaps a fortune, the lives of these gentlemen present a great temptation.

Any member of the Board will tell you that more men lose than make money by speculation, and they will laugh at you if you ask whether there is not some rule or some scheme by which a speculator may be sure of winning oftener than he loses. Yet it would seem that these men must have found some such scheme, for they live well, earn nothing, do no work, simply speculate, and they have been doing the same thing for years.

The crowd does not change much. Occasionally there is a failure or some one is "pinched out," which means in the language of the pit that he has lost all his money but does not owe enough or have enough assets to make the formality of an assignment necessary. Sometimes the man who falls gets some more money and begins again, sometimes he disappears, but there are not many such. The same faces to be seen in the wheat pit to-day could,



STILLWELL'S PATENT LIVE STEAM FEED WATER PURIFIER.

with a few exceptions, have been seen there five years ago, and many of them ten years ago. They are not like the professional gamblers who play with "advantage" cards or in some other way have a percentage in their favor all the time. Yet they live, seem to have plenty of money, and trade all the time nearly. How they do it is another Board of Trade mystery.

These men who make a living or something more by buying and selling grain and provisions which they never see and which many of them know very little about are either speculators or scalpers, and the latter are in the majority. Scalping and speculating are perfectly distinct kinds of business, their transactions are based upon entirely different premises, and for success require men of quite different qualities and capacities.

The speculator in wheat, for instance, considers the amount of that grain required for the use of the world, how much there is to fill the requirement, how soon some more may be expected, what its quality and quantity are likely to be, and from these premises makes up his opinion whether there should be an advance or decline from present prices. Then he buys or sells accordingly. He studies the supply and demand which must, of course, ultimately decide the price. After he has bought or sold, temporary or local causes may make the market go against him for a time, but unless those causes are such as to change his opinion previously formed upon the supply and demand basis, he pays no attention to them, but simply waits for their effect to pass. If they do change his opinion, he closes the deal and takes his loss as soon as possible.

As will be seen, the speculator needs for his business, a wide knowledge, good judgment, plenty of "nerve" and money enough so that he can afford to wait for his profit. Not many men who speculate have the combination, but to the few who have the business has been very lucrative. The men who have made the great fortunes on the Board have been speculators. And the men who have lost great fortunes there have been speculators.

All the scalper cares for is what the market will do in the next hour. He has no use for to-morrow until

comes, and then it will be a day by itself. Concerning supply and demand he is supremely indifferent. He would give more to have ten minutes' notice of what Hutchinson, Ream and Cudahy are going to do than to know exactly the number of bushels of wheat on earth and the exact amount that its inhabitants would eat. He is keen for news, but it must be of to-day. That which came yesterday, although it may be of the utmost importance with reference to the ultimate course of prices, is of no use to him. Its first effect has been felt, and that was all which interested him.

The scalper usually takes a profit as soon as he can see one, and always takes a loss at the earliest possible moment. A sixteenth of a cent gain is acceptable, an eighth very welcome and a quarter makes him happy. If the market looks very favorable he may wait for half a cent or even a full one, but not often. If the market goes against him it is his rule to get out of his deal with the smallest possible loss and try again. The amount of business that a scalper does with a very small amount of money is simply wonderful. He may have for his entire fortune not more than enough money to pay for a thousand bushels of wheat, yet in the course of the day he will have bought and sold a hundred thousand or more. The "nimble sixpence" is what the scalper believes in. It is not often that the scalper carries any open trades over night. The chances for large profits which the developments of a night might give him are more than offset to him by the chances for loss. Therefore, he closes up his deals during the last half hour of the session, and is able to sleep quietly.

Not very many of the scalpers have made large fortunes. Those of them who are worth \$100,000 can be counted on the fingers of one hand. Their money is made in too small quantities to be put away and saved. And then there is little incentive to save money. Is not the wheat pit still there? And if they choose to spend what they have made to-day can they not go to-morrow and get some more in the same place? Of what use, then, to bother about investments and the storing away of money for the future?

The mental processes of the successful scalper are not easy to fathom. Swift thought and action are his distinguishing

characteristics. No man on earth can form an opinion and act on it with more rapidity than the scalper. In a general way he tries to keep informed all the time whether his confreres are long or short, knowing that whenever the market goes against the majority of them they will give it still another push in the same direction in their effort to save losses. Then he watches the operations of the great traders, and of the commission men whose clients are "plungers."

He notes the course of other markets, and is anxious for first news of any event which will affect prices. Some of the scalpers seem to have, without any course of reasoning, an intuitive knowledge of the next lurch that the market will take. They become wonderfully keen in interpreting the meaning of little things, which would be unintelligible to others. Sometimes one of the big speculators will choose some new brokers through whom to buy or sell large amounts of grain, the object being to puzzle the scalpers. Sometimes they succeed, but the scalpers always make a guess at the principal, and nine times out of ten it is correct.

This constant watching is a hard strain on the nerves. There are but four hours' daily work for the scalper, but they are quite enough. In them are concentrated more thought and anxiety than men in ordinary business get in twice the time. But the worry and excitement of their business does not make these men irritable. They are the best-natured crowd in the world, and the most cheerful. Life to them, outside of the wheat pit, is very much of a joke, filled with good and enjoyable things which they well know how to find. The scalpers are all members of the Board. The nature of their business requires it. Not only must they be present in person, in order to take advantage of the smallest fluctuations, but if they were not members the commissions which they would have to pay would be greater than the profits. The great majority of speculators are not Board members. They are men engaged in all kinds of business and with them speculation is a secondary matter. Some of them make money. Most of them lose. That is evident, for from the money which the outside speculators make in other business an



lose on the Board, must be supported the army of commission men, the scalpers and professional speculators.—*Inter Ocean.*

## TOO MUCH WHEAT GROWING IN THE NORTHWEST.

In an address to the Minneapolis Chamber of Commerce, President A. B. Stickney of the Kansas City line said: I have just returned from a brief visit to my old home among the mountains and granite hillsides of New Hampshire. The average farm in that country is, say, 100 acres, of which perhaps fifteen or twenty acres may be called, in a sense, arable. On the old homestead which I visited I found growing, say, one-half acre of oats, three quarters of an acre of corn, one-quarter to one-half acre of wheat, a few potatoes and a small garden. Not to exceed twenty acres had been mown, and the hay nicely stowed away in the barn. The buildings were in excellent repair, and both inside and outside were as neat as could be desired. In the wood shed I noticed nicely stored away a year's supply of fuel. The man who now owns the place did not inherit it, nor, if I remember rightly, any other farm. The farm is a fair sample of the average in that township, twelve miles from the nearest railway station, and no manufacturing village in the vicinity. It is purely an agricultural district, and not considered by any means first-class even in that state. There are no mortgages on those farms, and almost every proprietor has some little money at interest. Now, my first conundrum is this: Why, if such results are possible in New Hampshire, should so many of our Minnesota and Dakota farms be mortgaged, and the teams which work them and the tools and machinery with which they are cultivated be mortgaged?

My second conundrum is this: How long can the farmers of Northern Minnesota and Dakota continue to occupy their farms and buy goods of the local merchants, who in turn buy goods of our jobbers and manufacturers, and raise nothing but wheat, the average crop being twelve bushels to the acre or less, and growing less and less every year? This is the conundrum to which I invite your special attention as being of immediate vital importance to the future of our city and its business, and I desire to suggest the propriety of your appointing a committee of say five members, and instruct them to make a thorough investigation of the whole subject, examine into the history of wheat growing, and especially its decadence in other districts, what has been substituted in its place, and generally if anything can be suggested or done by this Chamber which shall have a tendency to benefit this great section of country in which the interests of this city and its business men are so deeply interested.

This is one of the gravest problems that are now before the jobbers of the Northwest for consideration. The jobber trades with the country merchant, who in turn sells to the farmer. If the farmer fails, the failure of the others is inevitable, and the farmer must fail if he keeps on raising wheat. The world is led to believe that the wheat capacity of the Northwest is inexhaustible. The fact is that Northern Minnesota and Dakota are passing through the same state that Southern Minnesota and Iowa have suffered, whereas the average wheat yield used to be twenty bushels to the acre, and farms produced as high as forty bushels in the Red River Valley, the average yield of the state now is but twelve bushels. It costs \$8 to raise an acre of wheat. Where is the profit? The history of wheat farming in other portions of the country is this: The prairie lands, the first year they are broken, will yield twenty bushels. This perhaps pays for the farm. The second year it is a little better. This pays for the machinery and buildings. The third year it

falls off somewhat. The fourth year is still worse. The sanguine farmer says, "Well, this is a bad year," and tries it again. It is still worse, and so on, till the farms are actually mortgaged for the living expenses. It must be ground or beaten into our farmers to stop devoting all their soil and labor to wheat. In the old days of \$1 per bushel it was not so bad, but now it is ruin. The farmer should stop after the fourth year. Now the trading class is the great missionary class of the world. Constitute yourselves missionaries, and stop this state of affairs. When the country merchant comes to the city, impress upon him the necessity of a change among his customers. The policy of growing wheat alone must be abandoned.

## PREHISTORIC HARVESTING AND GRINDING.

The wonderful discoveries of Keller in regard to the lake dredgings of Switzerland have given us a wonderfully clear insight into the mode of life of prehistoric man. Thanks to the researches of Keller and others, we are able to reconstruct the social and domestic fabric of times long before the dawn of history. We have learned how men lived, what they ate, what implements of war



PREHISTORIC HARVESTING AND GRINDING.

and the chase they employed, their domestic utensils, and even their ornaments.

We are indebted to the *Farm Implement News* of this city for the accompanying engraving, taken from Figuer's Primitive Man, and showing one phase of prehistoric man's life. The harvest was cut by sickles, like those found in the lacustrine settlements of Switzerland. The grain was beaten out with a stick, and the grinding was done in a circular mill worked by a horizontal handle. The mill was composed of two stones, revolving one above the other, and was a substitute for the rough primitive grinders or crushers. Subsequently it became the mill used by the Romans—the *pistrinum*—at which slaves were condemned to work.

The impression prevails very generally that "the country" is heavily short in the corn market, and that for that reason there is likely to be a sharp advance at most any time, due to the attempts to cover speculative short lines. *Daily Business* made a tour among the representative receiving houses to day, interviewing ten or a dozen of the best informed men in the trade. With one exception they reported that their books showed very little corn sold for country account for September and October delivery that was not represented by actual corn in the crib or on the road. There has been free selling of corn for the country for May, however, and some selling for December. This inquiry was made as thorough as possible in order to arrive at a correct understanding of the situation. The idea, then, that "the country" was selling old crop futures under the idea that they could fill their contracts with this fall's crop does not seem to be borne out by the facts.—*Chicago Daily Business.*

## ORIGIN OF OHIO CANALS.

On Dec. 6, 1821, Micajah T. Williams of Cincinnati laid a resolution on the clerk's desk for the appointment of a committee of five to take into consideration that part of the Governor's message that related to the subject of canals. The resolution passed, and Messrs. Williams, Howe, Thomas Worthington, W. H. Moore and John Shelby were appointed on the committee. They attended strictly to their duty, and on Jan. 3, 1822, presented to the House an elaborate report recommending a law authorizing an examination into the practicability of connecting Lake Erie with the Ohio River by a canal. The third reading and passage of the bill occurred Jan. 31, 1822. Commissioners were appointed under the law, and they in turn employed Hon. James Gaddes of Onondaga county, N. Y., as an engineer. He arrived in Columbus in June, having examined the Cuyahoga summit. Within eight months the line had been surveyed and leveled. Every other preparation having been made, the commissioners invited De Witt Clinton, Governor of New York, to be present at the commencement of the canals. He arrived in June, 1825, and was heartily welcomed by Governor Jere Morrow and the people of Ohio with loud huzzas as the "father of internal improvements."

On the 4th of July, 1825, forty-nine years after the Declaration of Independence, the canal was commenced. Says Atwater: "The day was fair as heart could desire, and the summit where the first shovelful of earth was to be excavated was three miles or more westwardly of Newark. The underbrush was cleared off from an acre or more in the woods near the summit, where, under many wide-spreading beech trees, tables and seats were placed for the assemblage to dine. Governor Clinton, Governor Morrow and the state officers went to the ground on the summit and excavated each a few shovelfuls of earth. After this ceremony was performed, these officers retired to a rude platform under a shade, where, being seated, Thomas Ewing, Esq., our late United States Senator, delivered an address on the occasion to the people and to Governor Clinton. This address was replied to by Governor Clinton, who was repeatedly interrupted by the loud huzzas of the thousands there assembled. As soon as his address was finished, one burst of universal applause from all present followed it. One hundred guns told the world that the canal was begun. At these demonstrations of respect and gratitude, spontaneously given, Governor Clinton wept."

The Ohio and Erie Canal could scarcely be said to have been completed until 1831-2, nor the Miami and Maumee Canal from the Ohio River to Dayton until 1834, when the locks at Cincinnati were finished.

The commissioners named in the act of Jan. 31, 1822, were Benjamin Tappan, Alfred Kelley, Thomas Worthington, Ethan Allen Brown, Jeremiah Morrow, Isaac Minor and Eben Buckingham, Jr. Morrow, having been elected Governor, resigned, and M. J. Williams was appointed in his place. After the canals were fairly under way, Kelley and Williams were appointed acting commissioners, under whose superintendence the canals were constructed. The total disbursements for canals up to Dec. 1, 1832, amounted to \$5,163,725.24. The aggregate length of canals then constructed and owned by the state amounted to 400 miles, comprising 184 lift locks, overcoming a total amount of ascent and descent of 1,547 feet; 9 guard locks; 22 aqueducts; 214 culverts, 182 of which are of stone, sixty of wood; 9 dams for crossing streams, and 12 feeder dams. These statistics are of importance for comparison with later figures. The Ohio and Erie Canal from Portsmouth to Cleveland was fin-



ished in 1831-2. It is 309 miles long. The side cut from Lockbourne to Columbus is eleven miles in length. There are other canals connected with the main line at Carrollton, at Dresden, at Roscoe, at Bolivar, at Akron, etc. The Miami Canal connects with the great Wabash Canal of Indiana, thence down the Maumee Valley.

## CORN-RAISING IN SOUTH AMERICA.

The machete is the most prized and used of all implements. The native always carries it with him at all times, wherever, whenever and for whatever he goes. It is his weapon of defense against man and beast. It cuts his way through the dense jungle. It cuts the grass and chops up the green corn for his horse. With it he kills and cuts up his hogs and his beef, and with it he cuts his food; he uses it to take out a thorn from his foot; he uses it—but on rare occasions—on his neighbor. It is his best and most indispensable farming implement. The so-called plow is only used sometimes, but the machete always. With it he clears the briars, the brush and the long grass from his patch of corn, and with a sharp stick, or this same machete, he punches holes in the ground at irregular distances, drops in his corn, covers it up with his heel, and retires to the shade for kind nature to do the rest—or, rather, for nature itself to do the work and himself to rest. The corn is not planted in cross rows at regular distances, or in straight lines, so it can be afterward worked, because it is not intended to work it. Yet nature is so bountiful in this favored land that fair sized corn is produced. Two crops a year, and sometimes three, are raised. Rice is planted in an equally crude manner, two crops per year being gathered.

If the planters of our country would but use the proper kind of implements, and cultivate their plantations in an improved manner, we could have enough corn to enter into competition with the United States in the markets of Europe, and we could produce enough rice to not only supply our own but our neighbor's wants.—*El Porvenir Cartagena.*

## A NOVEL CRAFT.

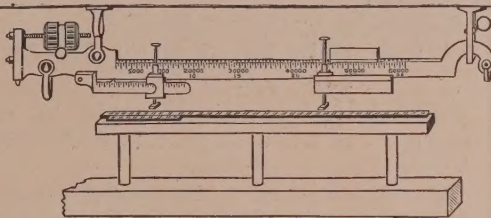
For a number of years Capt. Alex. McDougall has had in his mind the idea of a vessel which, if a success, he thinks would produce a radical change in the models of freight carriers on the lakes; and during the past year he has purchased and put into operation a shipbuilding plant at Rice Point, Minn., equipping it with everything necessary for the building of large iron and steel ships. Having, as he believed, perfected his plans he at last has put before the public as an experiment the odd looking craft which he, for reasons best known to himself, mysteriously names "101," of Duluth. The departure from modern models is a sort of cigar-shaped craft, nearly flat on her bottom, tapering at the ends from the bottom and sides to a point, leaving her straight on top, and when loaded and in the water looks like a cylindrical vessel. She is built of steel. Her length over all is 187 feet, beam 25 feet, 18 feet 3 inches molded depth, carrying 1,000 or 1,100 gross tons on 14 feet draft. From the bottom the sides rise to the load water level in almost the same lines as some of the most successful ships on the lakes. In fact, the shape of the vessel below the water line, the plating, heavy frames, and capacity are very like the iron ship Japan, sailed by Captain McDougall five or six years. Twenty feet aft of the bow and the same distance forward of the stern are two iron turrets each being 8 feet diameter and 7 feet in height, and within the after one is the steering gear; above the turret is an oak pilot house 10 by 12 feet in size, and in the forward and after turret is a fine Providence capstan. On the deck on top of this vessel is a walk guarded by steel ropes or guide lines for the safety of the crew going from one turret to the other, and between these lines are nine sliding hatches for taking on and discharging cargo. The molded ends are divided from the main hold by tight bulkheads. In the forward bulkhead is placed a Providence windlass and other facilities for handling the boat, while aft are the quarters for the crew. They are lighted by dead light and a passageway five feet in height is left between the top or deck and the top of the cargo hold; snubbing posts are set both forward and aft, the tow line passing through a thimble placed in the extreme bow. She is fitted with two double pumps, and has cast-iron fenders. She makes an odd appearance among our vessels, but that she will carry a large amount of freight on small draft, and can stand heavy weather cannot be gainsayed. On her way

down it was found that the compartment left vacant for machinery caused her to steer badly and she went in dock for the purpose of having the defect remedied. The opposition and objections offered since the commencement of this boat would have discouraged any man but Captain McDougall, but he, believing in his theory, has produced this craft and claims that she comes up to his expectations. On her way up, if he is as well pleased as now, the probability is there will soon be a ship much larger than this after the same model put afloat, which will embody the same principles.—*Marine Record.*

## A SELF-REGISTERING WEIGHING BEAM.

We understand that a patent has been allowed, and will soon be issued to Wm. E. Selleck of Chicago, for a registering beam, to be used on all kinds of scales where heavy loads are weighed. Frequent use of a scale will always demonstrate that mistakes are sure to follow, and in a majority of cases the mistakes originate from an imperfect reading of the weight as indicated on the beam, or a false record in the recording book. The object of this device of Mr. Selleck's is to make all such errors impossible. Instead of receiving any mental labor, the record is taken mechanically with no chance for a mistake.

Our illustration shows the simple nature of the device. Each mark or graduation on the beam has a correspond-



ing raised figure on the shelf below, and when the poise is adjusted to indicate the correct weight of the load on the scale, the stamp will strike the corresponding figure below and print on a card the weight. Any number of tickets can be printed in this way.

When a load is weighed by this method, and the record produced, all disputes as to mistake would be settled, and the party using it is placed in a position to maintain his ground. This device can be attached to almost any large scale, no matter of whose make. Any further information desired will be cheerfully given by BORDEN, SELLECK & Co., Chicago, Ill.

## THE CHINCH BUG.

[From the Report of Prof. C. V. Riley, U. S. Entomologist.]

Great and widespread have been the depredations of this repulsive pest, which, next to the Rocky Mountain Locust, is our most injurious species of insect enemy. From its depredations alone throughout the drouth-stricken region of the Mississippi and Missouri valleys, during the present season, many millions of dollars' worth of grain have been destroyed, and in several localities actual privation is liable to follow.

The annexed crop reports, culled from various daily and weekly newspapers published throughout this region, will give a slight intimation as to the true state of the subject under consideration. Still, each region always draws its own afflictions as mildly as possible, while in speaking of those of a neighboring district they are liable to be somewhat overdrawn or exaggerated.

About the beginning of the second week in July rumors of chinch bug depredations at isolated localities throughout the drouth-stricken area were first circulating through the press. A week later these rumors had become substantiated, and it was definitely known that their distribution and depredations were more widespread and general than was at first supposed: not only in this state, but also in Kansas, Missouri, Iowa, portions of Illinois, Minnesota and Southeastern Dakota. But not until harvest arrived was the full extent of their depredations known.

Causes of Increase.—When the matter is carefully studied, and the causes of the undue increase of this insect are taken into consideration, the wonder is that the injury was not greater than it actually has been. The long-continued drouth of last year, with large areas of chinch bug depredations, followed by a generally close and rather severe winter, after which came a warm, dry

spring and hot, scorching summer; all these favored in the greatest degree the most complete development of the bug in all its stages. But comparatively few of its natural enemies were present; and most of these, too, being species that prefer preying upon other insects to feeding on the unsavory rebel under consideration when they can be found. These predatory species had a plentiful host in the various species of Aphides, leaf beetles, and such like other depredators that were also present in great numbers.

One of the common and perhaps by far the chiefest of reasons for the large numbers of the pest that are always ready to take place whenever the advantage offers is the great carelessness of farmers in general to "clean up" during late fall and early spring. Especially is this true in portions of Nebraska, Iowa and Kansas. The bugs winter among rubbish of all kinds, in meadows, along fences, in brush heaps, among fallen leaves, and among the debris collected by hedges, weed patches, and along the outskirts of groves among the underbrush. But there is no use of my going over these points that have been mentioned again and again by all writers upon the subject.

After the bugs have become a pest the only effectual remedy is wet, cool weather. For some reason or other their constitution is not suited to a superfluity of moisture, nor can they adapt themselves to it. Humidity has the effect of bringing on disease and final dissolution with them, just as it does with various migratory locusts, the only difference being in favor of the locusts. A good, soaking rain, or at most two or three of such, following in the course of several days, generally ends effectually the most threatening chinch bug devastation, while, on the other hand, a year or even two years of such weather are sometimes required to entirely obliterate a locust plague.

The question then naturally comes up, can this insect not be materially kept in check by some other and natural means? My answer to this question is yes; to a certain degree this is quite possible, and not nearly so difficult a task as one might suppose. A good cleaning up and burning of rubbish of all kinds in late fall, winter or early spring will answer the purpose, if the work be general, by reducing the number of hibernating insects. Osage orange and all other very brushy hedges are the most attractive retreats, and at the same time the most formidable retreats to master. For my part, I would be in favor of removing these and replacing them with some other kind not so difficult to keep free from the collecting debris carried by winds. Uncultivated prairie lands adjoining fields should also be burned early in spring. The breaking down and burning of cornstalks in spring, following a chinch bug year, will also destroy myriads of the insects that have hibernated between the leaves and stalks. At other times, however, the stalks had better be utilized as manure, by plowing under. If covered deeply they will be a remedy fully as effectual as if burned. Protect the birds, and above all, the quails, for they destroy countless numbers of hibernating insects of various kinds that are to be picked up about hedges and such like resorts frequented by these birds throughout the year. Although belonging to the granivorous birds, the quail is essentially insectivorous except during inclement weather, when insects are not easily obtained. In my profession as taxidermist I have dissected many different species of birds, in the crops of which were contained many injurious insects of various kinds, the chinch bug among the others. In no other instance do I remember of the presence of this insect in the crop of a bird in so great numbers as in that of the quail. As a rule, but few birds, mammals, reptiles or rapacious insects seem to relish any of the odoriferous members of the order Hemiptera or true bugs. In winter, however, this repugnance is partially overcome, and now and then even a chinch bug seems a delicate morsel when "meat" is scarce.

Very few insects are known to prey upon the chinch bug, while I myself have never observed any of the species which have been credited with the good work—thus attacking the enemy. True, I have frequently seen different species of Lady-bugs (*Coccinella*, *Hippodamia*, etc.) and the Lace-wing fly upon the same corn-stalk with the chinch bugs. Upon close examination it was also ascertained that the plant was more or less infested with some aphid or plant louse, which had attracted these, their natural enemies, before the other bugs arrived. It must not be inferred from what I say here that I discredit the writings of such authorities as Thomas, LeBaron and others. Such is far from my intention.

Various remedies, as plowing, rolling, ditching, fencing, and the use of insecticides have been suggested and



used with more or less favorable results, both in this and other states; deep plowing immediately after harvest having succeeded in a few instances by covering the bugs so deeply that they could not creep out. Rolling at a like season has crushed large numbers, while ditching and fencing have succeeded in "bunching" them, and for a time checking their onward movement while migrating from small-grain fields to corn fields. At such times the dragging forward and backward of a heavy weight of some sort has been the means of causing great slaughter among their continually increasing ranks. Ditches into which water could be turned have formed complete barriers to their creeping migrations, but not to the after movements of the winged insects as they were about to mate for the second brood.

This insect, like all other depredators, has its likes and dislikes, and chooses its food plants with considerable daintiness of taste.

The small grains are the first on the list, after which follow some of the grasses and corn. Among the grasses Millet, Hungarian and Fox-tail stand at the head, while a few others that usually grow as weeds follow closely. Wild buckwheat is also quite a delicacy with them, and I have noticed several examples where weedy fields were less injured than clean ones, notwithstanding the fact that the one contained equally as many bugs as the other. Several farmers in this country have also mentioned the same fact to me. As a rule, grain in a grassy field has the disadvantage alongside of that growing in a clean one. During the past summer I saw several examples in which the scale was turned. One of these in particular attracted my attention at the time. The crop was corn, growing just across a road from a field of wheat which had been so badly damaged as to render its harvest useless. The ground was covered with wild Hungarian or Fox-tail grass, which at the time, Aug. 6, was dead and perfectly dry for a considerable distance in from the road. Upon examination it was found that our old acquaintance was at work here, attacking the Fox-tail in preference to the corn. Referring to my notes made on the ground, I find the following:

"The chinch bug is still present in considerable numbers in a few corn fields, but absent from others where there are signs of its work. In these a large per cent. of the grass (Fox-tail) has been entirely killed before the corn was attacked. In no instance has the corn been greatly damaged, the only perceptible injury being in the drying up of a few of the lower leaves."

We had several heavy rains just prior to this, so the partial disappearance of the pest could very likely be attributed to that cause. Since that date but a few scattered specimens of the bugs have been noticed. Hence, I imagine our rains of August and September have been of great benefit in their diminution.

In conclusion, I would state that the only remedy that I know of is in clean farming—burning all rubbish in early spring that has not disappeared during fall and winter, also the protection of our winter birds.

In regions that depend largely upon irrigation for moisture, or such that are easily flooded, there never need be any loss of crops from the depredations of this insect.

As to future possibilities of injury, we can say nothing definite, as weather alone will decide the matter, a wet year preventing and a dry one favoring their increase in damaging numbers.

A grain dealer of Toronto, figuring on the best reports available, makes it out that the farmers of Manitoba and the Northwest will receive \$2,000,000 more for this year's crop than they received for last. He estimated that 50 per cent. of the crop is more or less frozen, and that the price to be received for this frozen portion will range from 60 to 30 cents a bushel.

The stocks of grain in Chicago elevators Saturday evening, Sept. 8, were 3,861,692 bushels of wheat, 2,565,192 bushels of corn, 678,129 bushels of oats, 152,419 bushels of rye, and 40,448 bushels of barley. Total, 7,297,880 bushels of all kinds of grain, against 9,501,302 bushels a year ago. For the same date the Secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 30,438,018 bushels of wheat, 9,090,152 bushels of corn, 4,424,106 bushels of oats, 378,469 bushels of rye, and 110,022 bushels of barley. These figures are larger than the corresponding ones a week ago by 1,168,657 in wheat and 594,194 in corn. The visible supply of wheat for the corresponding week a year ago increased 524,207 bushels.



#### Issued on Aug. 14, 1888.

BALING PRESS.—Henry W. Schwarzburg, Henry F. Blank and Joseph H. Altheide, Quincy, Ill. (No model.) No. 387,923. Serial No. 270,333. Filed April 11, 1888.

CONVEYOR BUCKET.—Frederic A. Lockwood, Boston, Mass. (No model.) No. 387,649. Serial No. 269,482. Filed April 3, 1888.

CAR STARTER.—John H. Parmelee, Bridgedort, Conn. (No model.) No. 387,807. Serial No. 249,348. Filed Sept. 10, 1887.

CAR STARTER.—John H. Pendleton, Brooklyn, assignor to the Rapid Transit Cable Company, New York, N. Y. (No model.) No. 387,914. Serial No. 258,351. Filed Dec. 19, 1887.

CONVEYOR.—James F. Simmons, Manistique, Mich. (No model.) No. 387,820. Serial No. 250,756. Filed Sept. 26, 1887.

GRAIN SEPARATOR.—Eli W. Flagg, Battle Creek, Mich., assignor to the Nichols & Shepard Company, same place. (No model.) No. 387,869. Serial No. 263,595. Filed Feb. 10, 1888.

HORSE POWER.—George E. Burt, Harvard, Mass. (No model.) No. 387,495. Serial No. 243,600. Filed July 6, 1887.

#### Issued on Aug. 21, 1888.

CONVEYOR.—William Griesser, Chicago, Ill. (No model.) No. 388,194. Serial No. 252,351. Filed Oct. 14, 1887.

CORN SHELLER.—Alexis R. Montgomery, Decatur, Ill. (No model.) No. 388,062. Serial No. 251,541. Filed Oct. 5, 1887.

#### Issued on Aug. 28, 1888.

BALING PRESS.—Charles Peterson, Maple Plain, Mich. (No model.) No. 388,579. Serial No. 258,716. Filed Dec. 22, 1887.

BELT SHIFTER AND TIGHTENER.—Samuel Shive, Forks, Pa. (No model.) No. 388,729. Serial No. 255,436. Filed Nov. 17, 1887.

MEANS FOR OPERATING THE SLIDES OF GRAIN HOPPERS.—John Dable, Chicago, Ill. (No model.) No. 388,641. Serial No. 275,068. Filed May 25, 1888.

HAY PRESS.—William A. Laidlaw, Cherokee, Kan. (Reissue) No. 10,954. Serial No. 279,337. Filed July 7, 1888. Original No. 359,081, dated March 8, 1887.

HORSE POWER.—Allen Sampson, Victoria, Tex. (No model.) No. 388,586. Serial No. 275,419. Filed May 29, 1888.

CORN SCOOP.—John A. Johnson, Union county, Miss. (No model.) No. 388,687. Serial No. 271,704. Filed April 24, 1888.

#### Issued on Sept. 4, 1888.

SPROCKET BELT.—John B. St. Louis, Minneapolis, Minn. (No model.) No. 389,173. Serial No. 253,304. Filed Dec. 19, 1887.

GRAIN DRIER.—John Black, New York, N. Y., assignor of one-half to Jefferson T. Raplee, same place. (No model.) No. 3,9048. Serial No. 251,539. Filed Oct. 5, 1887.

GRAIN SEPARATOR.—John L. Owens, Minneapolis, Minn. (No model.) No. 389,002. Serial No. 232,370. Filed March 25, 1887.

#### Issued on Sept. 11, 1888.

BALING PRESS.—Willard L. Wight, Millbury, Ohio. (No model.) No. 389,349. Renewed June 22, 1888. Serial No. 277,938. Filed Feb. 17, 1887.

GRINDING MILL.—Robert A. Lister and George S. Richmond, Dursley, County of Gloucester, England, said Richmond assignor to said Lister. (No model.) No. 389,310. Serial No. 261,091. Filed Jan. 18, 1888. Patented in England March 15, 1887, No. 3,882.

AUTOMATIC GRAIN WEIGHER.—Ellis A. Hoover, West Milton, assignor of one-half to John B. Fouts, Troy, Ohio. (No model.) No. 389,513. Serial No. 267,606. Filed March 19, 1888.

Mississippi claims a corn crop of 35,000,000 bushels, which is said to be the largest since the war.

## TRADE IN THE SOUTHWEST.

[Special Correspondence.]

KANSAS CITY, Sept. 11.—In Kansas the past month has not developed an outlook much different from that of thirty days ago. Copious showers are reported to have fallen in the southwestern section of the state. Had these occurred a month earlier they would have resulted in bringing thousands of dollars to the state. The only effect produced, however, was to stay the wholesale emigration from that section of the state which had already set in. The many people who went into that land three years ago had become disgusted with the continued failures of corn and wheat crops, and many of them had picked up all movables and driven across the country farther to the east, where they could at least raise enough for their own families. Their experience in the far West had been to the contrary. For the three years they had been eating husks. They had gone into the new country of which they had heard such fine and glowing accounts with little money—hardly enough to pay for the needed improvements on the claim they had taken. Yet they trusted to the near future to be richly paid for all their troubles and cares. The near future instead of repaying them found their lands mortgaged up to the hilt with all sorts of incumbrances. The various investment companies, scattered all through the Southwest, had gobbled on to their claims, and they were paying these same companies at the rate of ten and twelve per cent. per annum.

Of course with good crops they could have met these payments, but anybody could foresee what the result would be as regards no crops. With nothing originally they could hardly expect to retain their claims on which they had spent three years of unsuccessful labor. No wonder they have become discouraged and are mourning for the flesh pots of the land of plenty from which they flew. Many of these discontented farmers came originally from Illinois. They left that state because they thought land was too high and because they thought they could get a quarter section in the new territory at next to nothing, from the Government. They have long since discovered that the change was the dearest kind of one for them. Had they remained at the original place they would now in all probability have been worth four or five times what they can muster to the front now.

The uncertainty of crops in Western Kansas must ever prove a drawback to the prompt settling up of that section. There is a scope of territory just to the west of Wichita, which is very uncertain, so far as wheat and corn are concerned. This district stretches up from the Gulf of Mexico to the northern portions of Nebraska. Some years the crops are very liberal, but on the average cereals do not do well. In the spring rains are copious and the weather most auspicious, but during July and August a sort of dry season sets in which burns up the crops and leaves the expectations of the farmer at the zero point. Those who have studied the causes say that the prevailing winds from the South during those months blow over the hot arid deserts of Northern Texas, and when they strike the state of Kansas burn up everything before them at short notice. It is certain that if there is not a favorable season next year the southwestern portion of Kansas will become almost denuded of its population, so far as the farmer element is concerned.

The grain men down this way are looking with a good deal of interest upon the action Congress will take with reference to the opening of the Indian Territory, or that part which is known as Oklahoma, for settlement. I have been down there several times, and it is certainly one of the richest sections of the country, and would prove a perfect godsend to farmers of the East who want to come West and raise liberal crops of all classes of cereals. It is just south of the richest and most prolific section of Kansas. The prevailing winds bring timely rains each year, and the certainty of liberal crops each year is next to certain. Should this country be opened up there is no doubt but that Kansas City would receive a great impetus as a grain center, and this is just what is needed. Yet there seems to be a general impression scattered about that there is no section of the country equal to this promised land. This is all a mistake. There are far better farming sections than can be found in the Indian Territory. The first few years after it is opened the settler will have to make up his mind to bearing a good deal of inconvenience on all sides. No schoolhouses, no churches, and in fact nothing but desolation and naked nature are to be seen in all directions. For the first three or four years the citizens would have to be a law unto



themselves. Of course railroad companies would see to it that communication with the rest of the world was had as soon as the productions of the country would insure them fair dividends for the expense of extending their roads. But it would be at least three years before these iron highways could be expected with certainty, and the grain of the country would have to be hauled long distances in order to get to a market—that is if enough were fortunately raised to supply their own wants and allow a surplus.

The receipts of grain at Kansas City so far since the wheat harvest was had, have not been as liberal as many of the elevator men had expected. It is found, too, that the kernel is not as full as was anticipated, hence the grade is not on that high level which had been fondly hoped for. As a spring wheat center Kansas City is still far in the background. The local millers even will not take the grade of wheat which comes to the city, except to a limited extent. It is said that more than three-fourths of the grain used by Kansas City millers comes from the North. The millers explain their act not from the basis of price, as it is the same with the difference of freight as at other centers, but that the kernel will not allow of the high grade of flour they are obliged to turn out to meet the demands of their customers. Yet strange to say Minneapolis millers come down here and buy this same wheat, ship it to their mills at the North, and return it again in the shape of flour, making a very fair profit on the transaction. The latter millers certainly sell a good deal of flour right here in Kansas City, and as a rule it is considered of the very best grade. However, our local millers were never noted for their farsightedness. Their competitors can make thousands where the Kansas City millers see only a poor-house. What is needed in Kansas City milling circles is a diffusion of Northern progressiveness. Until we have a good portion of this the milling and elevator interests of the city will be lacking very much in taking a leading position among the grain centers of the United States.

All the elevators are enjoying as much business as they will any time this year, and this is not saying much for them. The "A" elevator will probably have its greatest run of business as soon as the corn crop matures and is sent to market. This one is controlled by the Kansas City & Memphis road, and along the line of this highway the crop of corn promises an unusually liberal yield. This is about the only road running into Kansas City which will be able to supply corn to any great extent this year, and the bulk of this supply will pass through the above elevator. This has been almost rebuilt and all the most approved classes of machinery added to it, for the prompt and efficient handling of corn. The other elevators, while they are in first-class condition, do not expect to make so much of a specialty of corn, but will run all classes of cereals into their bins. Notwithstanding the shortage in crops, in general the elevators of the city have managed to pay very fair dividends so far. Of course it is necessary to run them on the most conservative basis, in order to do this. There is not much complaint of "mixing" on the part of elevator men, as was the case a year or two ago. This arises probably from the fact that the grades of grain coming to market will not allow of it. The grades are already barely passable, and it would not do to mix and run them into a lower one when they will barely pass muster now. It is to be hoped that elevator men will see to it that no more of this nefarious practice is indulged in. This is what has caused a greater drawback to the material interests of the city than any other one feature in it. Had it not been for grain mixing it is confidently conceded by the better informed grain men of the Southwest, Kansas City would have occupied a leading position as the winter wheat center of the world. However, the harm has been done, and the only method to get back to the original position is to abstain from a repetition of the act in the future. But the lesson was certainly very dearly learned.

At present there are in the local elevators 196,261 bushels of wheat, 55,285 bushels of corn, 130,101 of oats, and 2,150 of rye. It will be seen that the supply of wheat shows a decided increase, while corn is about at the same level as a month ago. The run of oats is the largest ever noted at this market during the middle of September, and there is no doubt that to a great extent it will take the place of corn for feeding purposes. The market for rye here amounts to next to nothing.

At Gibson, Ill., a sunflower may be seen growing out of a 20-foot stalk of corn.



[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interests of the trade at large, or any branch of it.]

#### CORN CLEANER WANTED.

*Editor American Elevator and Grain Trade:*—I would like the address of parties manufacturing a small machine for cleaning corn.

Respectfully yours, Z. W. MURPHY.  
Harrison, Boone Co., Ark.

#### COTTON SEED MEAL WANTED.

*Editor American Elevator and Grain Trade:*—We would like to know where we can get cotton seed meal for feeding, direct from the mills. Would like to correspond with some one.

Very truly, CLARKE & SONS.  
Moncton, New Brunswick.

#### NEW ELEVATOR.

*Editor American Elevator and Grain Trade:*—Inclosed please find \$1 for one year's subscription to the AMERICAN ELEVATOR AND GRAIN TRADE. I am building a 15,000-bushel steam elevator at Alhambra, Ill.

Respectfully yours, F. OSWALD.  
Alhambra, Ill.

#### DRIERS.

*Editor American Elevator and Grain Trade:*—Trade continues good. Last week I shipped a sand drier to the Ottawa, Ill., Glass Co., and have just sold a No. 2 Grain Drier to the Spillman Bros. Co. for corn.

Very truly yours, S. E. WORRELL.  
Hannibal, Mo.

#### INCREASED CAPACITY.

*Editor American Elevator and Grain Trade:*—Mr. Ben Jackson of Dunlap, Iowa, has completed enlarging his grain elevator at Dunlap, Iowa. He has increased its size and capacity; put in a new and larger engine, Barnard & Leas Corn Cleaner, link belting and other modern machinery, to handle all grain more rapidly and conveniently.

Yours, W. H. RULE.  
Dunlap, Iowa.

#### THE SIOUX CITY CORN PALACE.

*Editor American Elevator and Grain Trade:*—The second annual festival of the Sioux City Corn Palace will commence Sept. 24 and close Oct. 6. The managers desire me to say that they will consider your presence a special compliment to their efforts for its success. The corn palace design is copyrighted, as you will observe from the printed matter.

Very truly yours, JAS. V. MAHONEY, Sec'y.  
Sioux City, Iowa.

#### A NOTICE.

*Editor American Elevator and Grain Trade:*—We wish to say that the Avery Elevator Bucket Company is an entirely distinct organization from the W. G. Avery Mfg. Co. of this city, and is in no way identified with it. We ask the trade to, in future, please bear this in mind. The W. G. Avery Mfg. Co. are agents for our celebrated patent seamless steel elevator buckets.

Respectfully, THE AVERY ELEVATOR BUCKET CO.  
Cleveland, Ohio.

#### SHORT WEIGHTS.

*Editor American Elevator and Grain Trade:*—I can well appreciate the complaint made in your last issue by an Eastern correspondent. The problem of the hour is how to obtain correct weights. And this problem is complicated not only by human deceit but human fallibility as well. I do not believe that all short weights are the result of fraud, but that they are largely the result of mere human liability to err. It would be strange if the weigher did not make frequent mistakes. There are now a number of automatic devices, which not only weigh but record weight, mechanically, so that man's fallibility may be eliminated from the problem very soon. At least, let us hope that the employment of these mechanical devices

may soon become so common that one large factor in incorrect weights may be entirely removed. State laws ought to make the use of mechanical registers obligatory.

Yours,  
Chicago, Ill.

Aug.

#### CHANGE IN FIRM.

*Editor American Elevator and Grain Trade:*—I inclose \$1 for the AMERICAN ELEVATOR AND GRAIN TRADE, which I consider first-class in its line. The firm of F. A. Scott & Co. was dissolved by mutual consent, some time since, Mr. Geo. Gregory withdrawing from the business. My establishment is styled the Eagle Grove Elevator and Feed Mill, and the business consists of cleaning in transit, manufacturing ground feed and granulated meal, local grain buying and shipping, dealing in seeds, flour, coal, etc. I am also agent for the Consolidated Tank Line Co.

Yours very truly, F. A. SCOTT.  
Eagle Grove, Iowa.

#### GOVERNMENT REPORT ON CORN.

The September report of the Department of Agriculture makes 94.2 as the general average condition of the corn crop, which compares with 72.3 in 1887, 76.6 in 1886, 95 in 1885, 94 in 1884, 84 in 1883, 83 in 1882, and 60 in 1881. The indicated average yield is approximately 26½ bushels per acre, and the area is about 75,000,000 acres, suggesting a crop closely to or equaling 2,000,000,000 bushels—provided that no hard frosts occur before maturity of the crop.

The September condition of corn in Western states compares with previous years as follows:

	1888.	1887.	1886.	1885.	1884.
Ohio.....	99	68	89	97	80
Indiana.....	99	61	92	101	85
Illinois.....	98	57	72	96	86
Iowa.....	99	78	67	98	103
Missouri.....	92	67	62	90	104
Kansas.....	80	42	62	90	105
Nebraska.....	97	72	68	100	109
Minnesota.....	89	83	98	95	101
Wisconsin.....	93	73	71	92	99
Michigan.....	92	52	80	95	90
Kentucky.....	95	60	90	91	86
Tennessee.....	93	80	89	95	94

The area, production and yield of corn in late years is shown in the following compilation:

	Acres.	Yield.	Bushels.
1887.....	72,392,720	20.1	1,456,161,000
1886.....	75,694,208	22.0	1,665,441,000
1885.....	73,130,150	26.5	1,936,176,000
1884.....	69,683,780	25.6	1,795,528,000
1883.....	68,301,889	22.7	1,551,067,000
1882.....	65,669,546	24.7	1,617,025,000

#### THE DEPARTMENTS' MONTHLY CROP REPORT.

The report of the Department of Agriculture for Sept. 1 makes the average condition of corn 94.2; wheat, 77.3; oats, 87.2; rye, 92.8; barley, 86.9; buckwheat, 93.7; potatoes, 91.6, and tobacco, 87. The returns show but very slight falling off from the exceptionally high August report of maize, the general average having declined but one point during the month. The loss is almost entirely in one state, Kansas, where drouth and hot, dry winds caused a decline of 11 points since last report. This high average of condition has been exceeded but once during the past ten years, in 1885, when it stood at 95, and the largest crop ever grown was harvested. In the seven corn surplus states the average condition is 95 against 64 at the same date in 1887.

The average condition of spring and winter wheat when harvested was 77.3, against 82 last year and 87.8 in 1886. In 1885 it was 72, and in 1884 98. The winter wheat states show a slight improvement over the last report of condition (July), but there has been a serious decline in the spring wheat region of the Northwest. Chinch bugs were again a serious evil in portions of Wisconsin and Minnesota, while unseasonable rains at and after harvest materially lowered condition in these states and in portions of Iowa. Frost between the 16th and 18th of the month did some injury in the Red and Jim River valleys. The averages of the principal states are, winter wheat: New York, 86; Pennsylvania, 92; Tennessee, 96; Kentucky, 90; Ohio, 60; Michigan, 78; Indiana, 64; Illinois, 72; Missouri, 75; Kansas, 90; California, 85; Oregon, 94. Spring wheat: Wisconsin, 78; Minnesota, 70; Iowa, 73; Nebraska, 80; Dakota, 78.

The general average of oats at the time of harvest was four points lower than at last report. In only one year since 1881 has the September report made condition less than 90. This was in 1887, when it was 88.4.





The Jeffrey Mfg. Co. of Columbus, Ohio, have removed their quarters to East First avenue, in that city.

James Deal & Co. of Peoria, Ill., architects and contractors of grain elevators, report that they have all the work they can well take care of, at the present time.

B. F. Jackson, grain buyer for Fred P. Rush & Co. of Indianapolis, Ind., has invented a grain door which has such merit that the management of the Bee Line has ordered it adopted on all their grain cars.

In a recent letter the Barnard & Leas Mfg. Co. of Moline, Ill., write us: "Business is still rushing. We are still running our machine shop thirteen hours per day and part of the wood-working shop twelve hours."

The A. P. Dickey Mfg. Co. of Racine, Wis., are enjoying an unparalleled season of prosperity with their old reliable Dickey Grain Cleaners; their July and August shipments show an increase of 140 per cent. over corresponding months of all previous seasons.

The Robert Aitchison Perforated Metal Company of this city report shipments to Messrs. Burnham, Parry, Williams & Co., Philadelphia; Vicksburg Cotton Oil Company, Vicksburg, Miss.; and to Colorado S. & M. Company, Butte, Mont. They report business as lively.

Borden, Selleck & Co. of this city have recently sold Harrison Conveyors to the following parties: O. A. Smith, Miller, Dak., for the new elevator he has built there; Seeley, Son & Co., Fremont, Neb., for the new elevator they are building at Humphrey, Neb., and for the oatmeal mill at Sioux City, Iowa; and Hogan & Neilson, Seneca, Ill.

Geo. L. Jarrett, Des Moines, Iowa, writes us that he has no complaint to make of dull trade. He reports business this year ahead of previous years. Although he enlarged his works a short time ago, he is still crowded in filling his orders. He has on his books contracts for six complete new mills, and numerous orders for remodeling. He is also building his new double aspirator, which has some novel features.

The Pease Manufacturing Company of Racine, Wis., manufacturers of machinery, special tools, implements, etc., have on exhibit at the Minneapolis Exposition a separator and a Pease End-Shake Mill, handsomely constructed and covered with a complete nickel plate, which is attracting considerable attention. The company are now shipping to the same point two of their massive car movers. These machines take the place of switch engines, and are entirely new machines. They have the capacity to pull twenty-five loaded freight cars at a time, requiring only one man to manipulate them. Power from any steam engine can be utilized in running them. They are for use at elevators, mills, breweries, coal mines and other places where many cars are to be moved and they have no switch engines. This invention will be soon illustrated in these pages.

J. W. Sanborn, secretary of the Missouri State Board of Agriculture, furnishes the following crop report for August: Early August was wet, and later seasonable. Corn suffered from windstorms in early August over most of the state, and now stands at 90.7 of a full crop. Oats yield 31.7 bushels, and aggregate for the state 40,024,483 bushels. Chinch bugs are less reported, and have not been as injurious as expected. Cattle, 100. Wheat gives 13.8 bushels on an average, 1,381,439 acres, or 19,083,858 bushels, for the state, above acreage yield, but below the average gross yield for ten years of 23,682,263 bushels. Quality poor. Other fall crops average high.

The Supreme Court of Massachusetts has decided the case of W. P. Harvey & Co. of this city against Z. Taylor Merrill and W. E. Heald of Boston for the recovery of \$23,000 in favor of the plaintiff. Mr. Harvey received notice of his victory Wednesday evening. The case was for losses paid by William P. Harvey & Co. on purchase and sale of pork for future delivery on the Board of Trade in 1883. The case has been bitterly contested from the outset. The decision is important to the grain and provision trade for the reason that it establishes in still another state the validity of a Board of Trade contract as the McHenry case against Harper did in the state of Ohio.

## OPTION CONTRACTS.

The Appellate Court for the Northern District of Illinois rendered an important decision on Sept. 6 regarding option contracts, Judge McAllister writing the opinion. It was the case of George Schneider and others against Volney C. Turner. Mr. Schneider is president of the Illinois National Bank. He represents a syndicate which made a contract with Turner to buy a controlling interest in the North Chicago Railway Company. The contract of sale gave Schneider the option of making the purchase if the stock were taken by Dec. 15, 1885. Schneider claimed that he notified Turner of the acceptance of the contract of sale Dec. 14, 1885, which was a day before expiration of the limit, and the money was put up.

In the meantime Turner had been East, and had received an offer from the Yerkes-Widener syndicate in Philadelphia largely in excess of that offered by Schneider. Turner accepted their offer and threw the Schneider syndicate's agreement overboard. Schneider sued Turner for \$600,000 damages, but Judge Gary decided that the contract, being an optional one, was a gambling agreement, and hence void. Schneider and the Pecks appealed to the Appellate Court only to get a decision of Judge McAllister agreeing in all material respects with Judge Gary.

Judge McAllister says the law is "whoever contracts to have or give an option to sell or buy at future time any grain or other commodity, stock of any railroad or other company, shall be fined not less than \$10 nor more than \$1,000 and confined in the county jail, and all contracts made in violation of this section shall be considered gambling contracts, and shall be void."

The attorneys for Schneider contended that his contract did not come within the provision of this law, because there was no intention to settle upon differences in prices.

Judge McAllister holds that this would be true if the agreement were a mere proposition and not a contract of purchase, but he considers that it was an out-and-out contract for an option. It expressly recited a consideration, which is the moving spirit of a contract. The word "agree" used in the instrument, imparted a contract. Judge McAllister says that the instrument being a contract, it falls within the gambling act above quoted, and is hence invalid. Schneider and the Pecks can therefore get no damages for failure to sell them from the North Side Company.

## BARLEY SMUT.

Mr. Thos. Elmes of Princeton, Ont., has a word to say in regard to barley smut in a Canadian paper. Respecting the increase of smut Mr. Elmes says it is due to two causes.

Sowing the same seed year after year on the same land. Unfavorable seasons, such as alternate heat, cold and drouth, and during the past two seasons its rapid increase has, perhaps, been caused by the "barley scourer" attachment on the threshing machines. These grind the smut to powder and rub it into the grain, which, not being passed through the fanning mill, is deposited in the granary, where it sweats slightly, and becomes thoroughly impregnated with the smut, and when sown next season is sure to produce a great abundance of this fungoid growth. Many thousand bushels were rendered unsalable last season, being blackened by being passed through the "scourer." This season it may reach the millions if the same plan is adopted. Smutty barley should not be passed through the "scourer," but through the threshing machine a second time to remove the beards and smut, for then while passing through the mill all the smut grains which are broken are blown out, or if this be too much trouble at threshing time, pass the grain over a fanning mill immediately after the threshing is done. This will remove a good proportion of the smut, at least all that is light or broken.

Proceeding, Mr. Elmes says: "I have tried the many so-called remedies, such as bluestone, washing soda, etc. These I applied according to directions; but as they made but little improvement in the crop, I thought I had, perhaps, not done it properly. But this spring I received from the Experimental Farm, Ottawa, Ladoga spring wheat, which had been thoroughly and scientifically treated—indeed the grain I received had become so harsh and dry from the poisoning dressing that we were afraid it would not germinate, but it grew well, and so did the smut, for it constituted 14 per cent. of the entire yield; while four acres of Rio Grande wheat, of my own seed (not treated), just across the furrow, was without smut.

I believe the best remedy for it is to reject all seed grain which contains smut, and not sow on land that has produced it, if possible; but I believe the germs will not remain in the soil more than one year, if not renewed by grain being sown on the same land. To satisfy myself that grain can be impregnated with smut, I took barley entirely free from it, took smut from other grain, dampened it and rubbed the smut on it till it was thoroughly blackened. This I sowed close beside some not thus treated. The grain treated produced 25 per cent. smut, while the other was entirely free. So, I believe, the greatest caution should be used in the selection of seed, thrashing and cleaning the grain as soon as thrashed. Believing this matter worthy of very serious consideration, I have written these few words of caution to my brother farmers, hoping it will prove a benefit and guidance to them in the future."

## THE MATTER OF GRADES.

The discussion of the question of grades in Minnesota called out the following letter from Mr. R. C. Burdick, ex-Chief Grain Inspector, in reply to a letter from the Hon. Horace Austin. Among other things, Mr. Burdick wrote as follows:

You will, I think, agree with me that the mere matter of "grade" is not a measure or standard of value. It represents only a standard of quality, and by these grades, after they are well known, and the standard maintained, the article is sought for, and its price fixed after the "quality" or its mercantile value is established, and in order that this mercantile value be established permanently the grade must be fixed, and once fixed it should be held as uniform as it is possible to do, and then both the buyer and seller can operate understandingly, and if this is not done, then the result is dissatisfaction, disappointment and disaster to all concerned.

Again, the raising or lowering of the standard of quality (or grades) does not benefit the farmer to the extent of a dollar, for it brings to him just what it is worth for consumption, and no more, and he is the party you are most called on to protect, for he, a thousand miles away, busy preparing for another year's work, is entirely dependent on others to affix the standard of value on his production. And yet, while endeavoring to protect the producer, you should not lose sight of the purchaser, as he stands ready to purchase it with his money for what it is worth, and he cannot possibly do more. Hence, if you lower your standard of quality (or grade) you necessarily decrease its mercantile value, for it is worth so much and no more, no matter what grade you call it, and the producer will not be benefited, but impoverished thereby. It will be like the "flat" dollar; calling it a dollar does not by any means make it a dollar. Lower your grade of No. 1 hard wheat to admit of 10 or 15 per cent. of frosted wheat (or any other imperfection) and you decrease the mercantile value of that grade and benefit nobody.

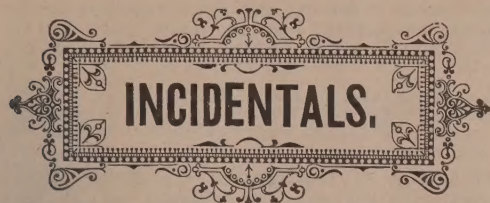
The same rule holds good with the No. 1 Northern grade, which is recognized as the milling wheat. Lower that grade and its value or price will be lowered as sure as the sun rises and sets. Hence, I argue the necessity for maintaining the grades as they now stand intact. The lower grades, as now established, will take care of the frosted wheat.

The "state" grades are known and understood perfectly in all the principal wheat markets of the world, and millions of bushels are bought and sold each year upon those grades, and perfect satisfaction exists, as witness the three years they have been in operation, and to now change them where nobody would be benefited would, claim, work more harm than good.

I must qualify the remark that no one would be benefited, as by lowering the No. 1 hard grade, there will be one class of people benefited thereby, which is the middle man, as when any strictly No. 1 hard wheat does show itself it will be immediately placed in a special bin and sold by sample for a higher price than your No. 1 hard, and this "special binning" wheat of any grade has a tendency to depreciate that grade which is left in store and is the bane and bugbear of the inspector and elevator owner. So the farmer who is fortunate enough to have good prime No. 1 hard wheat gets only a "grade" price, and is not benefited, while the middle man makes all he can out of it, and is benefited.

The lowest estimate we have seen yet of the wheat crop of Dakota and Minnesota is 55,000,000 bushels, made by an elevator man of Minneapolis.





Marion county, Ind., has some corn over fifteen feet high.

Texas has 3,000,000 acres in corn, and 1,375,000 acres in oats.

October wheat has sold in Duluth five cents above Chicago prices.

May wheat sold in Chicago on Sept. 3 at \$1.00, the first time since October, 1885.

In two weeks "Old Hutch" is said to have dealt in over 50,000,000 bushels of wheat, besides corn, pork, etc.

It is claimed that in Northern Dakota wheat is threshing out only eight bushels per acre, and of a poor quality at that.

Illinois has 7,000,000 acres in corn. The oats crop amounted to over 150,000,000 bushels, and the wheat crop to 34,300,000 bushels.

A leading Minneapolis miller says that 10,000,000 bushels of the wheat of Minnesota and Dakota this year will be unfit for good flour.

The greatest half day's work at wheat thrashing probably on record was accomplished by Henry Horn of Columbus, Ind. He thrashed and cleaned 1,200 bushels in six hours.

A sample of Russian white oats measuring seven feet tall was brought to this office last Monday from the ranch of Wm. Frey at Mendon. The sample is well headed out and was grown on land 4,000 feet above sea-level.—*Placerville, Cal., Observer.*

The Indianapolis elevators contained on Saturday, Sept. 8, 450,390 bushels of grain, against 331,780 bushels for the corresponding date in 1887. The increase of 118,610 bushels was largely in wheat, there being 378,276 bushels, against 254,790 at the same date last year.

A man in Kansas is said to be figuring on the length of a train required to haul the corn out of Kansas. He has got three times around the earth, and is said to be half way to the moon, with only the crops of Douglas and Sedgwick counties disposed of.

The Emporia Republican says: A stalk of corn from the farm of James Shaw, two and a half miles east of this city, was brought to this office by Millard Wilhite, which bears two ears that spread out like the horns of a Texas steer, and measure three feet from tip to tip.

Following is a statement of the visible supply of grain afloat and in store Saturday, Sept. 8, as compiled at the New York Produce Exchange: Wheat, 30,347,690 bushels; increase, 1,168,017. Corn, 9,093,297; increase, 592,820 bushels. Oats, 4,424,743; increase, 851,776 bushels. Rye, 378,003; increase, 130,430 bushels. Barley, 109,565; increase, 25,115 bushels.

A New York oat broker who has been perambulating the West says that while the crop was a big one, the oats are generally light in weight, and in some instances badly stained, owing to the rains during harvest. In Northern Michigan the crop was secured without injury, hence the oats there are generally bright, but Illinois has the largest yield of good merchantable oats.

For the past eight years the average yield of corn has been 23 5 bushels per acre, and average condition at harvest 81.7. On this basis the outlook from the August figures of condition is for an average yield of nearly 27 1/2 bushels per acre, which on, say, 76,000,000 acres, would imply a crop of 2,087,000,000 bushels, subject to future weather vicissitudes.

The total receipts of wheat at Duluth, Minn., for the year ended Aug. 31 were 17,779,912 bushels, while shipments were 19,216,578 bushels, or a falling off from last year of 1,861,327 bushels in receipts, and 2,068,308 bushels in shipments. This decrease in the movement is wholly due to the poor crop in Southern Minnesota and Dakota and in Iowa and Wisconsin, and the extra large demand by Southern mills. Of the total amount received there about 80 per cent. was No. 1 hard, showing it to be pre-eminently a market of the highest grade wheat. Prospects for the coming year are that receipts will increase, but that the percentage of high grades will not be

so large on account of the frosts. Many predict receipts of fully 25,000,000 bushels, which will include considerable wheat from the Province of Manitoba, shipped here in bond.—*Bradstreet's.*

In Manitoba the early estimates are for a yield of 15,000,000 to 16,000,000 bushels of wheat, 3,000,000 to 3,500,000 bushels of barley, and 6,000,000 to 7,000,000 bushels of oats. The market price for wheat opened last year at 46c, and this year is expected to open at 75c to 80c. The damage by rust is now not expected to exceed 10 per cent. Later the crop is reported to be yielding less than expected, with damage reported at 20 per cent. from frost Aug. 31 and Sept. 2. Wheat is in shock, but was cut in fine order. The barley crop is the finest in years. At Brandon and Gretna wheat was selling at 80c to 85c.

In regard to retaliation, Mr. Hugh McLennon of Montreal, one of the leading grain exporters of Canada, said that freer canals were the only remedy. Canada would have to stop the discrimination against Oswego and Ogdensburg on the Welland Canal. If the United States were to put a heavy toll on vessels passing through the "Soo" Canal, as she had a perfect right to do, Montreal grain men might as well close up. The trade would be diverted to Buffalo and the St. Lawrence route, and the port of Montreal be left dependent on Canadian grain. The abolition of the bonding privilege would have little effect on grain, as little came from Duluth, but there was no doubt that Canada would have to yield on this point and declare her cereals free.

The venerable Hiram Wheeler will celebrate his seventy-ninth birthday next Monday, Aug. 20. Mr. Wheeler is probably the youngest old man in this city in appearance and spirits, and it is rare indeed that he misses a day on 'Change. He has been actively in the grain business for fifty years next September, and thirty-nine of those years he has spent in Chicago. Prior to 1849 he was a grain dealer in Laporte, Ind., and St. Joseph. When he came to Chicago there was only one railroad here, and that ran out into the country eight miles. The total elevator capacity was 50,000 bushels. That was before steam elevators were introduced, and the warehouse business was conducted in the most primitive fashion. Although recognized as one of the pioneers in the elevator business, he modestly disclaims especial credit for the important part he took in founding the great elevator system of Chicago, which is one of the wonders of this most wonderful city on the continent. "May he live to be 100 years old" is the sentiment in which the thousands who know the hale and hearty old gentleman will join.—*Daily Business.*

### BINDER TWINE.

Few persons have an idea of the enormous consumption of twine in this country. One of the greatest demands for the article comes from the farmers, who consume 35,000 tons annually upon the self-binding harvesters. Allowing five pounds to the mile, this would be equal to a string long enough to go more than six times around the earth. It takes a length of about three feet of twine to tie a bundle of straw. The farmer sits on his machine, drives along through his grain field, and without any assistance cuts, bundles and ties ten acres of grain a day.

The twine used on the self-binder is generally made of sisal or manilla hemp. The sisal is the cheaper material, but it is not so strong or durable as the manilla. In some twines a mixture of the two is employed.

For binder purposes the twine should have sixteen turns to the foot, and a length of three feet would have a breaking strength of not less than seventy-five pounds.

The twine must be carefully made, free from swells or knots, or it will not run smoothly through the knotting device on the binder. The average consumption of twine on a binder harvester is two pounds per acre. About 1,200 feet of twine per acre are required. It costs the farmer about 25 cents per acre for his twine.

The manilla hemp makes much better twine, being stronger, smoother and more durable. The raw material costs more, and its twine sells for more than sisal hemp; but the manilla twine goes further, and is actually cheaper for the farmer, but this fact, however, is not appreciated by him, and he sticks to the sisal twine because offered at a little less per pound than the better article, manilla. Then again, the sisal twine breaks much oftener while running through the binder than the manilla. At every break the farmer must stop his machine and spend ten to twenty minutes in fixing it up. He never thinks of

charging his lost time to his poor twine. As long as he gets it for a cent or two less than the better article, he is perfectly satisfied, no matter if it does bother him.—*Scientific American.*

### DULUTH'S WHEAT TRADE.

The crop year ending Aug. 31 showed that the total receipts at Duluth were 17,779,912 bushels, while shipments were 19,216,578 bushels, or a falling off from last year of 1,861,327 bushels in receipts, and 2,068,308 bushels in shipments. This decrease in the movement is wholly due to the poor crop in Southern Minnesota and Dakota and in Iowa and Wisconsin, and the extra large demand by Southern mills. Of the total amount received here about 80 per cent. was No. 1 hard, showing this to be pre-eminently a market of the highest grade wheat. Prospects for the coming year are that receipts will increase, but that the percentage of high grades will not be so large on account of the frosts. Many predict receipts of fully 25,000,000 bushels, which will include considerable wheat from the province of Manitoba, shipped here in bond. The receipts and shipments by months were as follows:

Months.	Bushels	
	Receipts.	Shipments.
September, 1887.....	1,690,743	1,622,974
October.....	3,580,475	2,609,240
November.....	4,179,865	2,489,371
December.....	3,629,957	15,200
January, 1888.....	359,048	15,256
February.....	185,711	15,269
March.....	510,815	16,215
April.....	1,300,212	14,286
May.....	508,970	3,984,048
June.....	915,648	1,563,781
July.....	420,072	2,629,281
August.....	762,803	2,241,667
Total, 1887-8.....	17,779,912	19,216,578
Total, 1886-7.....	19,641,239	21,284,886

### THE WHEAT SITUATION.

The average condition of both winter and spring wheat on Sept. 1 is stated by the Department of Agriculture as 77.3, which compares with 82 a year ago, and 87.8 in 1886. In 1885 the average of the spring crop was 86.5 and of winter 65.8, the general average being about 73 for both.

If the ratio of condition to average yield this season should equal what it was last year the average yield per acre would be 11.40 bushels, which, applied to 36,300,000 acres, would imply a crop of 414,000,000 bushels. If the result should be similar to that of 1886, the yield would be 10.90 bushels, pointing to a crop of 395,000,000 bushels. In view of the multiplying evidence of disappointments in the Minnesota and Dakota crops, it is justifiable to assume that the official estimate does not logically suggest over 400,000,000 bushels as the result of the harvest, on the measured bushel basis, and that on the 60-pound basis the production is not likely to exceed 375,000,000 bushels. If this prove correct, the exportable surplus for the year will likely fall short of 75,000,000 bushels, as previously suggested by the *Price Current* as the possible limit.

The average condition of the leading spring wheat states compares with previous years as follows:

	1888.	1887.	1886.	1885.	1884.
Minnesota.....	70	72	87	78	102
Dakota.....	78	89	71	96	96
Iowa.....	73	71	96	88	98
Nebraska.....	80	76	76	90	98
Wisconsin.....	78	72	78	77	103

In a table elsewhere will be seen the details of averages for all the states.

The total area in wheat, the production and average yield in late years are shown in the following:

	Acres.	Yield.	Bushels.
1887.....	37,641,783	12.1	456,329,000
1886.....	36,806,184	12.4	457,218,000
1885.....	34,189,246	10.4	357,112,000
1884.....	39,475,885	13.0	512,764,000
1883.....	36,393,319	11.5	420,154,000
1882.....	37,067,194	13.6	504,185,000
1881.....	37,709,030	10.1	383,280,000
1880.....	37,986,717	13.1	498,550,000
1879.....	32,545,950	13.8	448,756,000
1878.....	32,108,560	13.1	420,122,000

—*Cincinnati Price Current.*

### PLENTY OF PLUCK.

"Oh, you haven't got enough pluck for a speculator," said the head of a board of trade firm to a complaining young operator.

"Pluck!" echoed the youth as he started for home; "well, I ought to have enough of it—I've been plucked every day for a month."—*Chicago Tribune.*



## ELEVATOR AND GRAIN NEWS

McGregor, Man., wants an elevator.

A new elevator is being built at Pauline, Neb.

A cotton seed oil mill will be erected at Providence, La.

Egloff Bros., Valley Mills, Tex., have built a new elevator.

Morrison & Poor, grain dealers at Ellis, Neb., have sold out.

Hume & Robinson, grain dealers, Austin, Tex., have sold out.

Brass & Co., grain dealers, Grand Forks, Dak., have dissolved.

John Kirchgessner will build a brewery at Jeffersonville, Ind.

A new 12,000-bushel elevator will be built at Hutchinson, Kan.

The Berlin Elevator Company, Berlin, Ont., will build an elevator.

Hedlund & Co., Dayton, Iowa, grain and live stock, have dissolved.

Mr. Alexander will build a 32,000-bushel elevator at Deloraine, Man.

Messrs. Coombs & Stewart will build a grain elevator at Neepawa, Man.

Messrs. Rogers & Mitchell, Clearwater, Man., are building a large elevator.

Binder & Wark have discontinued their grain and feed business at Golden, Col.

Churchill & Sons are putting another dump into their elevator at Meadows, Ill.

The total grain storage capacity of St. Lawrence, Dak., is about 250,000 bushels.

The Libby Elevator at Brownston, Minn., has been bought by Adam Rieger.

J. R. Phipps & Co. are building a new 40,000-bushel elevator at Hartford, Ky.

McDonald & Barnes succeed Mr. McDonald in the grain business at Bayard, Iowa.

Werts & Rokey have bought the grain business of G. C. Boggs, at Russell, Iowa.

Lewis Jones of Belleflower, Ill., will close out his grain and stock business in Kansas.

Messrs. Chalmers Bros. & Bethune will build a grain elevator at Pilot Mound, Man.

W. L. Reed succeeds to the grain business of H. T. Reed & Son, at Monteth, Iowa.

Watson, Shepard & Co., grain brokers, Minneapolis, Minn., have dissolved partnership.

T. C. Hawley & Co. succeed Thos. F. Orton & Co. in the grain business at Lancaster, Wis.

Snowden & Roberts, grain commission merchants, Baltimore, Md., have dissolved partnership.

T. W. Dollarhide & Co., Denison, Texas, grain and feed dealers, have dissolved partnership.

C. A. Whitney & Co. succeed C. A. Whitney in the grain and lumber business at Varna, Ill.

J. W. Wilson, grain and live stock, Dayton, Iowa, has sold out to Lind, Lundblad & Gustafson.

The Colorado Milling and Elevator Company, Denver, Col., have put in a 250-horse power boiler.

Jones & Parkhurst, grain and implements, Sheldon, Iowa, have sold out their implement business.

McMideal & Son of McGregor, Iowa, have their warehouse at White Lake, Dak., nearly completed.

William M. Potts, grain dealer at Whitehall, Ind., has failed. Liabilities small and assets not known.

W. N. Willis, in the grain and coal business at Aplington, Iowa, has sold out to Weisse & Ludemann.

A. D. Mulford & Co., grain commission merchants, Minneapolis, Minn., have dissolved partnership.

The Elevator Co., Winnebago Summit, Iowa, have put a new 15 horse power boiler into their elevator.

C. G. Bosch & Co., grain dealers, Davenport, Iowa, have dissolved partnership. C. G. Bosch succeeds.

Mr. R. Ironside is building a 40,000-bushel elevator at Manitou, Man. It will include chopping machinery.

The Central Elevator Company, Minneapolis, Minn., have amended their articles of incorporation, fixing their capital stock at \$500,000 and limiting their indebtedness

to \$25,000 for everything but wheat, and for that liability to the extent of \$500,000 may be incurred.

Paul Schwarz has been admitted to the cotton and grain firm of Williams, Black & Co., New York City.

Setzer & Conard, Kellogg, Iowa, have purchased a complete elevator outfit of Geo. L. Jarrett, Des Moines, Iowa.

Geo. L. Jarrett, Des Moines, Iowa, has shipped a complete elevator outfit to Wier & McMillen, Peterson, Iowa.

The Germania Brewing Association has been incorporated at Minneapolis, Minn., with a capital stock of \$250,000.

The Little Rock, Ark., Oil & Compress Company will spend about \$50,000 in improving their cotton-seed oil mill.

The Virden Flouring Mill Company, Virden, Man., will build an elevator to be used in connection with their mill.

The Sarnia Grain Warehousing Co. has been incorporated at Sarnia, Ont., Canada, with a capital stock of \$5,000.

The Mt. Clemens Elevator Company has been incorporated at Mt. Clemens, Mich., with a capital stock of \$3,500.

Heath Bros., in the grain business in this city and at Shelby, Ohio, have dissolved partnership. Roger Heath succeeds.

The Gate City Milling Co. will build a warehouse for storage purposes in connection with their mill at Rapids City, Dak.

The wheat crop of Brown Co., Dak., has been very large, and farmers are receiving eighty cents a bushel for No. 1 hard.

The Santa Fe elevator "A," in this city, has been made a regular elevator for the receipt and delivery of grain and flaxseed.

The elevator men at Duluth are getting ready for their usual fire tournament. A prize will be given to the winning elevator.

Jenkins Bros., grain dealers of Russell, Iowa, have dissolved partnership, and the business is now in the hands of A. F. Jenkins.

The B. & M. elevator, at Burlington, Iowa, is ready and in the hands and under the management of the firm of Rowland F. Hill & Co.

Two new elevators will be built at Cypress River, Man., this season. The local authorities of the town can give fuller information.

The St. Bernard Coal Company of Earlington, Ky., has added a small Harrison conveyor to carry pea coal to elevator for coking purposes.

E. Torrance, Worthington, Minn., has ordered an elevator outfit, with all the necessary furnishings, of Geo. L. Jarrett, Des Moines, Iowa.

Messrs. Garison Alford and T. J. Todd of Timpson, Tex., have ordered the machinery for cleaning cotton seed and will soon add an oil mill.

A. Miller, New Sweden, Me., has rebuilt his starch factory at Perham, which was burned last spring. His factory at New Sweden is nearly completed.

The Farmers' Warehouse Company at Woonsocket, Dak., have declared a dividend of 100 per cent. on business covering a period of only eight months.

J. Shaake, Anita, Iowa, has purchased of Geo. L. Jarrett, Des Moines, same state, an elevator outfit, with a full line of shafting, pulleys, sprocket wheels, etc.

The Dillon Oil Mill Company of Dillon, S. C., has been organized by J. W. Dillon, J. H. David and W. H. Seed. They will build a cotton-seed oil mill.

More than 75,000 bushels of oats have been marketed at Philo, Ill., this season, all except three carloads being white, the price paid being 25 cents per bushel.

The grain elevator at Lexington, Ill., formerly owned by John A. Campbell, has been sold to Haynes, Gordon & Co. of Chenoa, who will hereafter operate it.

The Lake of the Woods Milling Company are building an elevator at Deloraine, Man. Mr. C. A. Young and Mr. McMillan will also build elevators at that place.

Geo. L. Jarrett, Des Moines, Iowa, has recently shipped to J. P. Peterson, Ellsworth, Minn., an elevator outfit, with all the necessary pulleys, shafting, sprockets, belts, etc.

Seven elevators, of 25,000 bushels' capacity each, are about to be erected by the Keewatin mills, east of Winnipeg, Man., on the lines of the Canadian Pacific Railroad.

The new grain elevator at Port Huron, Mich., is said to be one of the best and strongest in the state. It will hold 455,000 bushels of grain, and is the fifth elevator in the city.

Articles of association were filed Sept. 4, by the Wendell Grain Co., organized for the purpose of carrying on in Detroit, Mich., the business of buying and selling all kinds of grain, seeds, provisions and produce generally. The

capital stock is \$20,000, and the stockholders are F. William Lichtenberg, John H. Wendell, Christian J. Lichtenberg, Harvey E. Wendell, Eber Ward and Aaron Parker.

The Macon Oil & Fertilizer Company, Macon, Ga., are making extensive additions to their works and will put in another large engine. Their capacity will be increased 20 tons daily.

Thomasboro, Ill., is an excellent grain market. Babb & Morrison have found an engine necessary in their elevator. They have bought about 50,000 bushels of oats of the new crop.

With the completion of the new elevators on the Northwestern Railroad, Groton, Dak., will have nine elevators, with a combined capacity of 300,000 bushels, which entitles her to the name of the Elevator City.

At St. Paul, Minn., the Hicks Malting Company will build a four-story malt house and elevator at a cost of \$60,000. The construction will consist of common brick, corrugated iron, slate and metallic shillings.

Messrs. Alden Barnes and W. B. Probasco, Barnes, Ill., are building quite a number of new corn cribs at this place and will do a general grain business in the future, Mr. Probasco having bought a share in the elevator.

Monaghan Bros., Hawarden, Iowa, have ordered an engine, boiler, warehouse separator, combined sheller and cleaner, one brush machine, one granulator, and a full line of mill furnishings of Geo. L. Jarrett, Des Moines, Iowa.

Brooks Bros. have begun the erection of a new elevator at Schurmeier, five miles north of Grand Forks, Dak. This firm now has a large line of first class elevators in Minnesota and Dakota, and is very popular with the farmers.

The Greentown Roller Mill and Elevator Company has been incorporated at Greentown, Ind., with a capital stock of \$10,000. The directors are W. F. Templin, A. A. Covall, A. E. Curles, Stephen Colescott and L. O. Dorman.

The farmers of Dodge county, Neb., are not patronizing the Farmers' Elevator Company as they ought to, and a warning has been sent out that unless they support the concern it will fall into the hands of the greedy elevator trust inside of six months.

The first to teach publicly how to starch linen was a Dutch woman, Mrs. Dingley. She charged \$25 for teaching the art and \$2 for showing how to make the starch. Starch in those days was made solely from wheat, but now, or since 1841, it is made mostly from corn.—*Globe-Democrat*.

Messrs. Finch & Hayward of Davenport, Iowa, have their large elevator at that point well under way. The E. H. Pease Manufacturing Company, of Racine, Wis., furnish the complete outfit of machinery, cleaners, etc., and one of their men is superintending putting up the machinery.

The Farmers' Union, Oakland, Neb., have made a levy of 50 per cent. on their stockholders, and will erect an elevator immediately, the cost of which will not be less than \$5,000. It will have a capacity of 15,000 bushels. It will be the largest one in Burt County, and built on the latest designs.

The North Dakota Elevator Company, which removed its general office from Jamestown, Dak., to Duluth, Minn., last fall, removed to-day to Minneapolis, Minn. The principal reason for the change of base given is the bad passenger train and mail facilities on the Northern Pacific Road out of Duluth.

M. Killion & Co. of Downs, Ill., have traded their stock of goods for the elevator of J. M. Moon at Mansfield, same state. M. Killion will go to Mansfield and run the elevator at that point, and J. R. Carlisle will manage the elevator at Downs. The firm name will remain as heretofore, M. Killion & Co.

Judge O'Brien of the Supreme Court, at the instance of the First National Bank of Chillicothe, O., has granted an attachment against the property of the Scioto Valley Grain Company of Ohio, in a suit to recover the value of a carload of 700 bushels of wheat worth \$600, alleged to have been converted by the company.

A joint stock farmers' elevator company has been formed at Millbank, Dak., with a capital stock of \$3,500. It has leased the round elevator, and commenced buying wheat. The officers are: W. F. Burmon, president; A. L. Patridge, vice-president; D. W. Diggs, secretary and general manager; directors, F. B. Roberts, H. Schrupp and A. M. Hagan.

The Oliver Oil Company of Charlotte, N. C., have recently built a new seed warehouse, new oil house and new boiler room. Have put in two new boilers, new engine, presses, linters, etc., and doubled the capacity of their mill. They have the same officers as last year: A. E. Thornton, president; Geo. L. Baker, secretary and treasurer; Thos. M. Belk, manager.

Burlington, Iowa, has elevators for the holding of grain and warehouses for the accommodation of farm products, and is one of the best grain points in the West. During the past year no point west of Peoria and Chicago has handled grain to as good advantage as Burlington. Her railroad facilities are first-class. She is the central of one of the most important points on the Chicago, Burlington & Quincy system, and has nine railway lines in all.



She has the great Mississippi at her side, a constant menace to railroad corporations, and her freight rates are consequently reasonable at all times. She does an immense lumber trade, being able to receive her consignments at small cost for transportation down the river from the Northern pineries. She does a large wholesale business and a great and growing jobbing trade.—*Env.*

A syndicate of Portland, Ore., capitalists, have purchased the docks and warehouses of the Tacoma Dock and Warehouse Company, Tacoma, Wash. Ter. T. B. Wilcox, vice-president of the Portland Flouring Mills Company, is one of the company. The new owners will continue the wheat shipping business, and will probably also use the buildings for grain storage in connection with the new 1,000-barrel mill they are about to build at Tacoma.

Dr. John Stemer of Woonsocket, and Aug. Null and William Glensdorf of White Lake, Dak., have succeeded in putting the Farmers' Shipping and Purchasing Association on a substantial basis. This will give five buyers of grain at White Lake. They have secured sufficient money for the erection of an elevator, purchasing machinery and necessary expenses attending such a large enterprise. The site has been obtained and the work of construction begun.

S. R. Post, one of the best-known traders on the Produce Exchange of New York City, suspended Aug. 21. Mr. Post was a bear on wheat, and it was estimated that he was short about 6,000,000 bushels, while he was a bull on corn, and was long on that cereal nearly 1,000,000 bushels. His losses will amount to about \$275,000, which it was stated he would soon pay in full. He was pinched in the Harper deal, a year ago, which reduced his fortune to \$1,000,000. He will probably resume.

The Griffiths-Marshall Grain Commission Company of Minneapolis, Minn., have filed articles of incorporation with the secretary of state with a capital stock of \$100,000. The incorporators are Charles S. Hulbert, Charles M. Amsden, Olaf N. Ostrom, James Marshall, William Griffiths and George H. Dodge, all of Minneapolis. The general nature of the business of the corporation will be the handling of grain and other farm products on commission or otherwise; also the owning and operating of grain elevators or warehouses within and without the state of Minnesota.

A dispatch to a Chicago paper from Fargo, Dak., says: "Considerable animosity is being engendered against elevator companies at unjust grading of wheat now being marketed. That there is considerable damaged wheat in the territory is not denied, but there are localities where such is not the case, and it is claimed the elevators are slow in judgment and unjust in grades. More wheat will be marketed in Dakota than reports would indicate, and while considerable is of good quality, there is a great deal of damaged wheat mixed with it which will lower the grade. The average yield will not be over eight bushels."

The Northern Pacific Elevator Company is composed of Messrs. J. Q. Adams, of Minneapolis, president; G. S. Barnes, of Fargo, S. S. Eaton, St. Paul, E. S. Bristol, of Boston, W. H. Dunwoody, Minneapolis. All of these gentlemen, accompanied by their representative, F. Noonan, of Spokane Falls, Washington, Ter., were in Tacoma recently, completing arrangements for a new building. The company has 180 elevators in Minnesota, and has already eighteen in this territory, and has completed arrangements for six more. They have elevators all along the Northern Pacific Railroad.

The Ohio Grain and Seed Company of Cincinnati, has an agent operating what is believed to be a swindling game in the southern tier counties in New York. A Delaware county farmer, who came near being caught in the net, gives the following account of his experience: A man of business-like appearance and address called upon him, representing himself as an agent for the Ohio Grain and Seed Company, and offering for sale an alleged new variety of wheat for seeding purposes, styled, "gold medal wheat." The agent represented that the variety was something new, and of which his company controlled the whole supply in the country, and he exhibited to the farmer a lot of certificates alleged to be signed by prominent Western wheat growers, stating that they had tried the new kind and had found it extraordinarily prolific and valuable for flouring uses. The agent offered to sell the farmer 10 bushels of the seed wheat, to be sowed this fall, at \$15 a bushel, and to take a note for the amount (\$150), payable on the first of next July, and, to secure the farmer against any possible loss in the transaction, the seed company would give him a bond agreeing to pay him \$15 a bushel for 10 bushels of his crop, and \$5 a bushel for all he raised in excess of that quantity. The agent figured that eight acres of land, seeded with 10 bushels of this wonderfully valuable variety of wheat, would return a crop of 500 bushels of the value of not less than \$2,500. The farmer was captivated with the prospect of big profits in wheat growing, and gave the agent an order for 10 bushels of seed and his note for \$150, taking a receipt and bond as specified. But the agent had hardly got out of sight and given the farmer a little chance for reflection when a gleam of suspicion entered the granger's mind that he had been made the victim of a swindle similar to the "Bohemian oats" fraud that was quite extensively practiced a few years ago. He consulted a neighbor about the matter, and his suspicions were confirmed by finding out that the seed agent had offered his note for sale to this neighbor at a liberal discount from its face value. On learning this the farmer hitched up his horse and started in pursuit of the seed

man, whom he overtook at Hancock just as he was about boarding an Erie railroad train. At first the fellow put on a bold face, claiming that the transaction was legitimate, and that he had forwarded the note to his company at Cincinnati, but when threatened with summary arrest he gave up the note to the maker.

The storage capacity for wheat at Tacoma, Washington Ter., is extremely limited, compared with the requirements. It consists of nine warehouses, with a floor area of 45,000 square feet. Every foot of this floor was loaded, not long since, seven sacks deep with wheat, the track-room back of the warehouses was tolled with box cars loaded with wheat, the side tracks of the Northern Pacific all the way from Tacoma, out the valleys of the Puyallup and the Green Rivers, up, through and over the mountains and strung along through the plains of the other side into the heart of the great wheat fields—every inch of room and every available car was crowded with wheat.

A rather clever game was recently brought to disastrous end, as far as the worker of it was concerned. A man named Campbell came to this city with a letter of introduction to Chandler, Brown & Co., purporting to come from C. N. Walker & Co., of Peoria, Ill. He presented a bill of lading for 5,600 bushels of corn, which bill appeared to be regular in every respect, and wished the firm to dispose of it for him. He then borrowed \$200 of the firm. They became suspicious, and upon telegraphing to Peoria, learned that the man's papers were forgeries. Campbell was traced to Peoria, where he went under the name of William Berry, was arrested and brought back to Chicago. He was held to the criminal court in bonds of \$1,000.

## Fires, Casualties, Etc.

Henry G. Morris, grain and lumber dealer, Eden, Ill., died recently.

The death is announced of Ralph W. Baker, of the Duluth Board of Trade.

The death is announced of C. A. Briggs of the firm of Briggs & Co., grain dealers, Taunton, Mass.

C. Moore of the firm of C. & W. C. Moore, millers and grain dealers, Moscow, Idaho, died recently.

A. T. Gullet, a grain dealer at Elliott, Ill., is very low with consumption, and his recovery is despaired of.

The elevator of J. G. Vancleve & Co., Macon City, Mo., has been burned. Loss \$5,000; fully insured.

A little boy and a box of matches caused the destruction of a warehouse and 10,000 bushels of grain at Franksville, Wis.

The elevator of Gregg Bros. at Fairfield, Neb., was struck by lightning Aug. 16 and burned to the ground. It was almost empty.

The floating elevator of George Gilchrist at New Orleans, La., was destroyed during the tornado which visited that coast, Aug. 17. The elevator was valued at \$13,000.

The wheat warehouse of the Northern Pacific Railroad, at Tacoma, Wash. Ter., collapsed Aug. 15, destroying about 6,000 tons of grain. The piles of the building had been eaten through by worms.

Magor Bros. & Co., grain merchants, Montreal, Canada, suffered a loss of several thousand dollars by smoke and water. Fire in an adjoining building was the cause. The loss was covered by insurance.

The steam elevator of J. B. Johnson of Darien, Wis., burned to the ground with its contents, early on the morning of Aug. 24. The total loss was about \$5,000, on which there was an insurance of \$3,000.

Early on the morning of Aug. 21 the malt house at Rondout, N. Y., was burned, with 30,000 bushels of malt belonging to Neidlinger, Schmidt & Co. of New York. The loss was about \$100,000.

The death is announced of Frank I. Young, at Toledo, Ohio, a member of the grain commission firm of Young Bros. of that city, at the age of 41 years. He was a member of the Toledo Produce Exchange.

The large warehouse at Tulare, Cal., belonging to T. Hatch & Co., was burned recently. The capacity of the warehouse was 4,500 tons of grain, but fortunately, at the time of the fire, it contained only about 2,000 sacks of grain.

Charles F. Rubel of Detroit, Mich., employed at the Union elevator in Detroit, was crushed to death by a windlass, Sept. 7. He was drawn under the machinery in such a way as to crush his skull, cut off one of his hands, and many bones broken. He was 38 years old and leaves a wife and five small children.

Gen. C. P. Buckingham died in this city recently at the age of 80 years. Deceased came to Chicago in 1856, and with Solomon Sturges built the Illinois Central elevators. In 1863 he went to New York state, and engaged in the elevator business in Brooklyn. In 1868 he moved back to Chicago, and with his brothers, managed the elevators

he had built ten years before. In 1873 he united with his brothers in establishing the Chicago Steel Works, and was president of that institution at the time of his death.

The St. Anthony and Dakota elevator at Hunter, Dak., burned Sept. 5, together with three horses and four thousand bushels of wheat. The origin of the fire was unknown. It was first seen in the stable. Fully covered by insurance.

The death of Geo. F. Withers at Liverpool, Eng., is announced. Mr. Withers was the New York manager of the export business of W. S. Patterson & Preston, and was a member of the New York Produce Exchange. He was suffering from consumption and had returned to Liverpool where his people lived, some time previous to his death. He was 31 years old.

Henry Combs of the firm of Combs & Halsey, grain jobbers, died at his home in Jersey City, N. J., recently. He was a member of the Produce Exchange of New York City, and was noted for his cheerfulness, jollity and great good nature. He had been sick but a little over two weeks. He was a member of the New Jersey Assembly and of the Jersey City common council. He was sixty years of age.

The two elevators, with their adjoining coal sheds and offices, belonging to Murray & Robinson, and C. A. Conklin, at Clark, Dak., burned with all their contents, Sept. 4. The loss was about \$6,000, one-half covered by insurance. Both will rebuild at once. The fire was supposed to have been set by drunken tramps. The Van Dusea elevator adjoining was also on fire, but was saved by the good work of the fire company and citizens.

The distillery of G. W. Robson, Jr., & Co., Finchtown, Ky., was the scene of a great explosion, Sept. 4. George Ulrich, the night watchman, was making his rounds, and going into the condensing room on the third floor with his lantern, the light came in contact with the escaping gas from a leaking pipe and a tremendous explosion followed. Ulrich was badly injured, being severely burned about the face, arms and head, and it was feared that he inhaled the flames, which was probable, as the room was one solid mass of flame. Medical aid was summoned, and he was removed to his home in an unconscious condition, and it was feared that he would not survive. The terrific force of the explosion blew out the sides of the building and set fire to the structure. The damage to the building was \$1,500, fully covered by insurance.

The extensive buildings of the Herman Berghoff Brewing company, Fort Wayne, Ind., which were only recently finished at a cost of \$20,000, were almost totally destroyed by fire Aug. 22, only the outer walls remaining standing. The fire department responded promptly, but was handicapped by the low water pressure, it being impossible to raise a stream above the third story. The efforts of the department were turned to saving the valuable machinery. The brewery was a magnificent structure, designed by Architect Wolf of Chicago, and fitted up in modern style. The Berghoff brothers, one of whom is the treasurer, were the principal stockholders in the concern. The loss was estimated at \$100,000, with only \$10,000 insurance. The brewery will be rebuilt at once. The origin of the fire was unknown, but was supposed to have been caused by spontaneous combustion.

## MANITOBA GRAIN STANDARDS.

Extra Manitoba hard wheat shall be sound and well cleaned, weighing not less than 62 pounds to the bushel, and shall be composed of at least 85 per cent. of hard Red Fyfe wheat grown in Manitoba or the Northwest Territories.

No. 1 Manitoba hard wheat shall be sound and well cleaned, weighing not less than 60 pounds to the bushel, and shall be composed of at least two-thirds of hard Red Fyfe wheat, grown in Manitoba or the Northwest Territories.

No. 2 Manitoba hard wheat shall be sound and reasonably cleaned, weighing not less than 58 pounds, composed of at least two-thirds of hard Red Fyfe wheat, grown in Manitoba or the Northwest Territories.

No. 1 hard White Fyfe wheat shall be sound and well cleaned, weighing not less than 60 pounds to the bushel, and shall be composed of not less than 60 per cent. of hard White Fyfe wheat, grown in Manitoba or the Northwest Territories, and shall not contain more than 25 per cent. of soft wheat.

No. 1 Manitoba Northern wheat shall be sound and well cleaned, weighing not less than 60 pounds to the bushel, and shall be composed of at least 50 per cent. of Red Fyfe wheat, grown in Manitoba or the Northwest Territories.

No. 2 Manitoba Northern wheat shall be sound and reasonably cleaned, of good milling qualities and fit for warehousing, weighing not less than 58 pounds to the bushel, and shall be composed of at least 50 per cent. of hard Red Fyfe wheat, grown in Manitoba or the Northwest Territories.

No. 1 spring wheat shall be sound and well cleaned, weighing not less than 60 pounds to the bushel.

No. 2 spring wheat shall be sound and reasonably clean, weighing not less than 58 pounds to the bushel.

No. 3 spring wheat shall comprise all wheat fit for warehousing, not good enough to be graded as No. 2, weighing not less than 56 pounds to the bushel.

Rejected spring wheat shall comprise all wheat fit for warehousing, but too low in weight or otherwise unfit to be graded as No. 3.

Goose wheat No. 1 shall be plump and well cleaned, weighing not less than 61 pounds per bushel.



# THE AMERICAN ELEVATOR AND GRAIN TRADE.

— PUBLISHED ON THE FIFTEENTH OF EACH MONTH BY —

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## ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

## CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., SEPTEMBER 15, 1888.

## DALRYMPLE ON WHEAT PRICES.

Perhaps the views of Mr. Oliver Dalrymple, the bonanza farmer, in regard to wheat prices, present and probable, may not be regarded with confidence; but they are worth repeating, even if they are three weeks old. Mr. Dalrymple thinks the world's wheat crop is 300,000,000 bushels short. He believes that the world's reserves are pretty well exhausted, and that our own crop of winter wheat is fully 50,000,000 bushels short. Further, he states that while Minnesota and Dakota have raised a full crop of straw, the wheat there makes only from one-half to two-thirds of a crop. He therefore thinks that after seven years of falling wheat prices an upward tendency is now unavoidable, and he looks to a return of the times when wheat sold at \$1.25 at Chicago. We may add that Benner, the Ohio prophet, predicts a general advance in prices all around, and a prosperous good time commencing this fall and next year. We hope the anticipations of Mr. Benner may be realized.

## THE ST. CLAIR FLATS CANAL.

The discussion of the Fisheries Treaty and the retaliatory policy against Canada advocated in some quarters has given rise to a question as to whether the United States has a clear title to the St. Clair Flats Canal. On the one hand it is claimed that this canal is in part through Canadian territory, and that for twenty years the game and fishery overseers of the Dominion have had full charge of that section of the St. Clair Flats through which the canal runs. In the river and harbor bill of 1874 there is a clause which seems to concede that a portion of the canal at least is through Canadian territory, and this holds true of the Soo Canal and Detroit River.

On the other hand, it is true that in treaty stipulations Canada has always conceded our ownership in the St. Clair Canal; and as it was built by American money and under an act of the American Congress, with no protest from any source, it would seem strange that an adverse claim should be set up at this late stage of the game. We do not believe that our Canadian friends intend seriously to claim either the Soo or the St. Clair Canal. They have too often conceded our rights in both to now set up an adverse claim. Still, it is deplorable that two countries that should be bound by the closest ties should now be seeking

means by which one may hurt the other. Diplomacy should avert such a result. No matter how truculent either side may be, we want neither war nor making faces at each other. Let business interests have some weight in the settlement of our differences with our neighbor.

## MINNEAPOLIS WHEAT GRADES.

A large amount of unnecessary excitement was created by the assertion that the Minnesota Board of Warehouse Commissioners was about to alter the grades so as to accommodate the grades to the inferior wheat of the present year. A howl went up everywhere, from Chicago, Minneapolis and Duluth, protesting against any such unwarranted move against the integrity of established grades. And now it appears that the commission never anticipated making the changes which they were credited with as desiring.

The original rumor said that from 5 to 10 per cent. of frosted wheat was to be permissible in No. 1 hard, the highest grade, and from 25 to 50 per cent. of frosted wheat in No. 2 Northern. Of course this meant revolution; and all the dealers in the Northwest arose in arms against such an arbitrary innovation. In Minneapolis it was proposed that three separate grades be made for the frosted wheat; but so strong was the feeling against changing the present grades that even this proposition was voted down.

The facts of the case are that Minnesota inspection has always admitted a small percentage of frosted grain even in the highest grade, No. 1 hard. The fact has not been advertised, for very obvious reasons; but, nevertheless, a small percentage of frosted wheat has not acted as a bar to high grading when the wheat was otherwise hard, mature and clean. The present instruction to inspectors is to allow a trace of frosted wheat in No. 1 hard if the grain in other respects is all right. In No. 1 Northern from 10 to 15 per cent. of frosted wheat will be permitted if the grain is in the right condition. A still larger percentage of the frosted grain will be allowed in Nos. 2 and 3 Northern, with due regard to the other characteristics of the grain. So we may conclude that the scare about Northwestern wheat grades is unfounded.

## THE INTER-STATE COMMERCE LAW.

The lower House of Congress has passed a number of amendments to the Inter-State Commerce Law. One of them provides that in all civil actions and proceedings of whatever nature under the law, jurisdiction is conferred on state courts, making their jurisdiction concurrent with that of the United States Courts. A stringent amendment in regard to pooling was voted down, because its provisions were too strict. An amendment was adopted, aimed at the discrimination practiced by railroads in favor of oil companies that own their own tank cars. The following was adopted without amendment:

That where any railroad company heretofore chartered or incorporated, or which hereafter may be chartered or incorporated by act of Congress, has built or constructed and operates or shall build, construct or operate a railroad through, across or into the territorial limits of any state or territory of the United States, the tolls, rates and fares made or charged for the transportation of property and passengers over or upon such road or roads for traffic within the limits of a state or territory and the tariffs and schedules thereof shall be subject to the legislative control of and by the several states and territories through, across, or into which such road or roads are constructed, built or operated, anything in charter or acts of Congress creating such company or companies, or any law of any state or territorial legislature enacted in pursuance to such charter or act of incorporation to the contrary notwithstanding.

Sec. 2. That Sec. 1 of this act shall be limited in its operation, and shall apply only to the carriage and transportation by such company or companies of passengers and property wholly by railroad, or partly by railroad and partly by water, when both are used under a common management, control or arrangement, from one place or station to another place or station, both being within the territorial limits of one and the same state, or they shall in no case apply to any commerce between the states, territories, or into foreign countries.

When Senator Cullom introduced and advo-

cated the Inter-State Commerce Bill he freely admitted that it was only tentative, and not perfect or anywhere near perfect. He simply advocated it as a commencement of grappling with the problem which would afford a basis for future legislation. It is a big contract which the legislative power has undertaken, that of securing exact justice to shippers from the railroads; but we have no doubt that sooner or later the best wishes of the friends of justice will be realized.

## AN ELEVATOR INSURANCE SUIT.

THE suit of the Farmers' Union Elevator Co., of Minneapolis against several insurance companies has been decided in favor of the plaintiffs. The elevator company has lines of elevators on the Manitoba and Northern Pacific roads. These elevators were insured in a number of companies, and one policy covered them all, the same agency placing the insurance. Among the elevators was one at Hawley, Minn., which was destroyed by fire last winter. The insurance agents subsequently discovered that the name of the Hawley Mill did not appear on the policy, and proposed to take advantage of the error and not pay the loss, which amounted to \$18,414. The companies sued, and the respective amounts claimed were: Fire Association of Philadelphia, \$2,702; American Fire Insurance Company, \$2,702; Syndicate Insurance Company, \$1,351; Liverpool & London and Globe, \$2,702; Queen Insurance Company, \$2,702; Lancashire Insurance Company, \$1,351—making a total of \$13,513. Judge Lochrea holds that the companies must pay the insurance, inasmuch as the omission was their own, and inadvertent and unintentional.

## THE NORTHWESTERN WHEAT CROP.

One of the chief centers of interest just now is the wheat crop of Minnesota and Dakota. The most diverse opinions are expressed in speculative circles both as to the quality and aggregate quantity of wheat from the fields of the Northwest. Doleful reports came from that section before the grain was hardly planted, and they have grown every week until now. As matters stand now it is almost impossible to hazard a guess as to the amount of wheat that has been gathered. Travelers who have visited that section have brought back dark pictures of the condition of affairs. On the other hand, local papers in some localities paint the situation in rosy colors, and the inspection so far does not seem to look bad for quality. Bull estimates give the crop of Minnesota and Dakota down as low as 55,000,000 bushels, while bear estimates reach as high as 90,000,000 to 100,000,000 bushels. Conservative estimates are from 70,000,000 to 80,000,000 bushels, with a broad hint as to impaired quality. The fact is that the crop was a wretched failure in some localities, while in others it was very good. It will require a couple of weeks yet to decide what is a fair compromise between the bull and bear pictures of the situation.

We hear "an unfounded rumor," as Hans Breitmann would say, to the effect that a large company with ample means is to be formed for handling Northwestern wheat for millers, buying and selling by sample only. Their idea is not to allow any wheat of their purchase to go into storage warehouses except their own, delivering wheat to the millers, precisely as it is delivered to them, without mixing or grading.

THE E. H. Pease Manufacturing Co. of Racine, Wis., manufacturers of grain elevator supplies and outfits, have secured control of the entire line of "Excelsior" Dustless Grain Separators, graders, polishers, oat clippers, etc. We are assured that this company have secured through Mr. W. W. Ingraham, the former manufacturer, patents on several valuable improvements in these machines, and as they purpose building all the machines heavier and stronger than they have ever been made, it is safe to assume that they will furnish some of the best machines in the market.



## Editorial Mention.

MR. T. C. FRIEDLANDER, secretary of the San Francisco Produce Exchange, is in the East on business connected with the Exchange.

WE invite and earnestly request correspondence from all our readers, whether subscribers or not, on all subjects of interest to the trade.

It is estimated that the Nicaragua Canal will require about \$75,000,000 for its construction, and it is expected that it will pay 6 per cent. on a capital stock of \$200,000,000.

THE subscription price to this paper is only one dollar per year. Frankly, now, don't you think it is worth that nominal sum to have its regular monthly visit repeated twelve times a year?

THE grain dealers of Southern Minnesota and Dakota had a conference at Winona on Aug. 28. It is well for grain men to get together and map out the campaign, instead of fighting each other tooth and nail.

If you have anything to sell, advertise it in our columns. If you want to buy anything, send us an advertisement of your wants. We know that this journal is carefully read by thousands of people who are responsible business men.

THE Omaha Board of Trade claims to be in a flourishing condition. Its building and lot are worth \$190,000, on which bonds have been issued to the extent of \$79,000. The membership is 260, and the rentals amount to \$20,000 per year.

ATTENTION is directed to the advertisement of A. L. Duykinck & Co. of Rising Sun, Md., whose card will be found among our Commission Cards. One of their specialties is Cecil county hay. They invite correspondence from all interested parties.

THE Agricultural Department pronounces the worm which has damaged corn in Nebraska to be the Corn Root Worm, *Diabrotica loricornis*. The worm has not been known to thrive on any other crop, and consequently the remedy is to practice rotation of crops.

RECEIPTS of wheat at Minneapolis for the year ending Aug. 31 were 47,109,490 bushels, as against 39,278,380 bushels last year. This is the largest quantity of wheat ever received in any primary market in the world. It exceeds the whole of the wheat crop in Minnesota.

THE corn crop will be tremendous and elevator men should get ready to handle it. A corn sheller and cleaner are necessary adjuncts, and in many localities a grain drier is both desirable and profitable. In fact, a drier will generally be found useful for grading up grain that is a little off.

AT the Chamber of Commerce in Minneapolis on Sept. 8, a car of No. 1 hard wheat sold for an even 100 cents per bushel. It was over four years since cash wheat sold for a dollar in Minneapolis. In May, 1884, sales were made at \$1.02, but the dollar mark speedily disappeared and only came to the surface again last week.

A SOMEWHAT peculiar suit has been commenced in the Circuit Court of Cook County by Reynolds & Lindblom, an Open Board of Trade firm, against Charles H. Smith, who is also a commission merchant on the Board. The former firm did some business with Smith and sent him checks which did not reach him until some days after they should have done so, had the mails been

promptly delivered. In the meantime Smith sued out a writ of attachment for his money. This, the plaintiffs say, seriously injured their business reputation, and they have therefore sued for \$50,000 damages.

AMONG the new commission cards in this issue, to which the reader's attention is directed, is that of J. M. Girvin & Son, 220 Spear's Wharf, Baltimore. This firm has been in business for over forty years and are well known to the trade in their specialties, flour, grain, hay, seed, etc. They invite correspondence and consignments.

NOTWITHSTANDING the fact that business on the Erie Canal has not been as lively this year as could be wished, it still remains true, as the *Canal Advocate* says, that "the patient mule still dictates terms to the grain carrying roads for seven months in the year, and that the grain traffic in the canal will always assume immense proportions."

THERE seems to be a general desire on the part of members both of the Chicago Board of Trade and the New York Produce Exchange to abolish the afternoon session altogether. The grain receiving firms in this city seem to be quite generally in favor of the scheme. Most of those who express themselves decidedly favor a continuous session, closing about 1 o'clock.

ON Sept. 12 the rate on grain from Chicago to the seaboard was reduced from 25 to 20 cents per hundred pounds. The Pennsylvania road first put the new rate into effect, the purpose being, it is supposed, to bring about a more speedy adjustment of the troubles between the Eastern lines. The Pennsylvania road owns a line of steamers and is largely in a position to dictate rates on export stuff.

A DISPATCH from Fargo says that a gigantic wheat trust is being formed in the Northwest, backed by leading capitalists of Minneapolis, Duluth, St. Paul, Fargo and Brainerd. The trust will deal only with the higher grades and the plan of combination is to purchase all the wheat delivered at the elevators for storage, paying a price slightly above market quotations. All this is delightfully indefinite and probably not strictly true.

SOME six years ago, at the Illinois Central Elevator in this city, the David Dows loaded 70,000 bushels of corn in two hours and ten minutes. This has been the fastest loading on record until a few days ago, when the new steamship Helena loaded 71,000 bushels of corn at the new Armour Elevator, on the North Branch, in this city, in one hour and fifteen minutes. This is nearly a thousand bushels per minute, and everybody ought to be satisfied with it.

ONE day the past month Leopold Bloom and Hutchinson made a big trade on the Board. Bloom offered to sell a million bushels of December wheat at 95 3-8. One of Hutchinson's brokers accepted the offer, which was coupled with a further offer to put up \$250,000 as margins. Two certified checks for that amount were put up. That is a colossal sum of money to put up on a single deal consummated in a few seconds. Both men could easily lose that amount, however, and yet buy bread.

GENERAL surprise was manifested in this city by the unexpected dissolution of the partnership existing between S. D. Foss, E. B. Strong and Joseph Reynolds, under the firm name of Foss, Strong & Co. The firm went out of business on Aug. 31. Ex-Alderman S. D. Foss was the head of the firm, who for years was known as one of the most conservative members of the Board of Trade. Joseph Reynolds, the company, is the owner of the "Diamond Jo" steamboat line, and E. B. Strong is also a very wealthy man. The firm had been one of the most successful as well as extensive grain dealers known to the trade.

The members retire with ample fortunes. Foss will take recreation for some time in California, and Strong and Reynolds will permanently retire. For a series of years Foss, Strong & Co.'s profits were in excess of \$100,000 per year, and they had a list of 400 active customers.

THE call for the Dickey Grain Cleaners has been so great of late that the company besides running their works to their full capacity have been obliged to put on extra men and work overtime. They are still behind orders. New improvements have made their old standard cleaners more popular than ever.

DAKOTA wants a canal. Like everything in that wonderland, it is to be no ordinary canal. It is to be 480 miles in length, 160 feet wide and 20 feet deep, connecting the Missouri with the James. The estimated cost of the canal is \$20,000,000; but, on the other hand, it is claimed that such a canal would throw open to navigation 1,500 additional miles through excellent country and afford irrigating facilities for 32,000,000 acres of land which only lacks facilities of this kind to make it an addition to our arable territory.

It would seem that De Lesseps is either in his dotage, is an enthusiast, or only a trifle removed from an impostor. It would appear impossible that any man should hold out the promises which he does to the stockholders of the Panama Canal in the light of the enormous expenditure of money and life already made. Every disinterested report says that the Panama Canal is years of time and millions of money distant from completion, and yet De Lesseps insists on regarding the project as already in the stages of successful completion.

It is with deep regret that we chronicle the death of Mrs. Angeline Ewell Howes, wife of Simeon Howes of Silver Creek, N. Y. This sad event occurred at Silver Lake, N. Y., on Aug. 22, whither Mrs. Howes had gone two weeks previously for a visit to the scenes of her childhood. Mrs. Howes was nearly seventy years old, and was married to Mr. Simeon Howes nearly fifty years ago. With her husband she had resided at Silver Creek, N. Y., since 1856, and was the mother of seven daughters. She was a most estimable Christian woman, whose good deeds will be cherished in the memory of all who knew her. To her mourning husband a wide circle of friends tender their heartfelt sympathy.

OLD timers will remember how E. L. Harper, at present sojourning in the Ohio penitentiary, "laid down on" his brokers, Preston & McHenry, in 1881, causing them a loss of nearly half a million dollars. Harper acted the part of the scoundrel that he was by nature, and old Joe Preston died of a broken heart. Judge Sage of the United States District Court of the Southern District of Ohio, has rendered a decision in the litigation that followed upon Harper's treachery, in favor of Preston & McHenry. The amount involved is about \$300,000, of which possibly \$25,000 may be recovered from the wreck of Harper's estate. Judge Sage unmercifully scored the Harper side in the whole transaction.

THE Illinois Railroad and Warehouse Commissioners brought some of the railroads to time in short order lately. A number of grain receivers went before the commissioners and made complaint against several of the grain-carrying railroads, which they accused of discriminating against the private elevator concerns. There is a sharp competition for the grain arriving here and the owners of private systems have been paying the highest prices for it in order to fill their bins. This was calculated to operate against the interests of the "regular" elevators, or those owned by the railroads themselves, and in order to turn the scales in their own favor the managers of the roads undertook to impose additional switching charges on the owners of private elevators. An order issued from the offices of some of the rail-



roads positively forbids the switching of cars to the private concerns at the regular charge for that service, and in so doing furnished the ground for complaint of discrimination. The roads, on the other hand, charged that the private elevators were cutting on storage rates, but they nevertheless gave up their practice of discriminating against them in switching charges.

### TESTING WHEAT.

Several years ago, as many will remember, Mr. Donnelly made a campaign against Gen. Washburn for Congress. One of Mr. Donnelly's most effective arguments among the farmers was known as the "brass kettle" argument. The "brass kettle" is an instrument used by wheat buyers in testing the weight of wheat, with a view of establishing the grade, it being understood, of course, that the less a given quantity weighs the lower will be the grade. It is a fact well known to wheat dealers that the instrument can be manipulated by skillful hands in such a manner as to make the weight vary a pound or more per bushel, whichever way it is desired.

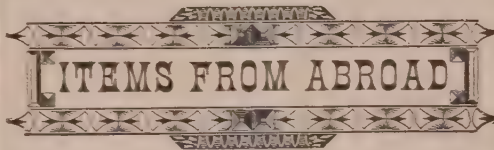
The clamor against the brass kettle became so intense that the legislature, some six years ago, adopted the so-called "Stacy filler." It is the same old kettle with an attachment on the top through which the wheat runs in streams. It is a sort of filter, though the apertures are so large that the wheat does not pack. It is a fair way of filling the kettle, and what is still better, the weight cannot possibly vary. But the enactment of the grain and warehouse laws of 1885 repealed all the old grain laws, and figuratively knocked the bottom out of the "Stacy filler."

Gov. McGill has recently had his attention called to the fact that under the present system of testing the farmers are liable to receive something less than the full value of this year's crop. A shrinkage of one pound, more or less, per bushel would mean a loss of hundreds of thousands of dollars to the grain producers of the Northwest. After pondering over the matter for a time the Governor, with his well-known desire to mete out full justice to the farmers of the state, dug up the old "Stacy filler", and summoned Deputy Inspector Clauson to appear before the Board of Railroad and Warehouse Commissioners and conduct experiments with the same, the Governor having previously suggested to the Board the adoption of it. He believes that if adopted by the Board in all cases when wheat is tested by the state inspectors, the dealers generally will adopt it, and a very perplexing feature of the wheat question will have been solved. A *Tribune* reporter witnessed the experiments by Deputy Clauson yesterday, and saw him fill the old "brass kettle" in a dozen ways, and no two times did it weigh the same. Having the power to adopt the Stacy method of testing, the Board of Commissioners will doubtless do so to the great advantage of wheat producers.—*Minneapolis Tribune*.

### DEALINGS IN FUTURES.

A friend writes, asking why *The Herald of Trade* does not take a stand against option trading? In reply we will state that the changed relations of the times have given to option trading a standing that cannot be denied. Our friend must not ignore the fact that every transaction made for future delivery a bona fide delivery has to be made, provided the buyer so wills, and such transaction is based on a certificate that represents actual article. Of necessity a brokers' certificate of one hundred or more tons of wheat or barley can be made to represent a great many transactions, all being necessary is to keep the margins well protected. These transactions, which having the air of gambling, are, to a very great extent, the arbiters of the market for the actual article. There are times when one or more bold operators can run a successful corner or unduly depress values, but these are an exception and not the rule; and besides corners have been run and depressions made in actual article since the early '80s. Aside from this, sales for future delivery are not confined to Call Board Exchanges, for the time has long gone by when a jobber or manufacturer buys or sells only what are called spot goods, the bulk of the transaction in merchandise and produce of every description nowadays are for forward delivery. To the buyer the market to-day offers an inducement to invest in one or more commodities that are either in transit, in course of shipment, or, as yet, have not been marketed, and he acts accordingly; but before the time for delivery arrives the condition of trade, the position of the articles, or the views of the buyers may have so changed that his judgment led him to close out, so far as he is concerned, his interest either at a profit or a loss, as the case may be. It is the sales for future delivery that admit of large manufacturing enterprises, and which is taken advantage of by our salmon and fruit packers as well as by manufacturers of every article of wear. By these sales a line of credit is established which enables the packer or manufacturer to carry on his business virtually upon a cash basis. The dealing on 'Change in grain futures is not more reprehensible than the buying and selling of merchandise for future delivery. Probably the rapidity with which certificates of sales for forward delivery change hands, is the objectionable feature to our friend, if so he must not overlook the fact that the only way to determine the actual value of an article is to put it up and let the one who wants it the most bid the highest price,

which, if acceptable, is sold. These transactions cause rapid changes in valuations, which are more rapid and wide because the commercial world under the impetus of steam and electricity moves faster; it is more sensitive, and besides it is no longer a question what a local operator will give for wheat, but what the world will give for it. He who fails, whether merchant, jobber or speculator, to keep up with the changed relations of the times, and does not adjust his business to the new order of things has only himself to blame if he is left with the wreck and ruin that the progress of the age leaves behind.—*Herald of Trade*.



It was stated in the International corn market at Vienna that the exportable wheat surplus of Austro-Hungary this year would be about 18,300,000 bushels.

A Buda Pesth cable says the Russian rye crop will be 520,000,000 bushels, the largest in history, and that 60-day contracts for the laying down of Russian rye in any European port at 56c a bushel are easily negotiable.

The final memorandum about the crop of India makes the area 26,854,882 acres, giving a crop of 258,275,081 bushels of 62 pounds each. The report states that prices went up in the spring owing to poor crop prospects and the deficiency of food grains last year, and the surplus in Bengal and the central provinces was taken by Northwest, but when the present crop was assured prices fell all around.

The city of Paris is now building a magnificent structure, Halles au Bles, for her grain, flour, and produce traders. It will be larger than the Exchange at Chicago and more imposing, because topped by an enormous dome. The members of the board will be charged only a moderate rental, the offices being numerous enough to support the undertaking. The trade is now done in a very small room opposite the Louvre.

H. Kains-Jackson, an English grain statistic of high reputation, says that the wheat crop of the British Isles is four-sevenths of that of last year. This means, we infer, an import of 35 to 40,000,000 bushels of wheat more than last year. The estimate of the shortage of 19 to 29,000,000 hectolitres in the French crop, or 55 to 75,000,000 bushels, means a requirement of that much more than last year, when France was an importer.

According to the latest mail advises Budapest authorities estimate the Hungarian wheat crop as a fair average. The area sown was slightly larger than last year, but this increase has been more than offset by the floods of last spring. The yield is estimated to be 35,000,000 centals, equal to 128,000,000 bushels; that is to say, about 5,000,000 centals, or 18,300,000 bushels less than last year. More than two-thirds of this crop will be required for home consumption. Rye and barley are unsatisfactory, but corn is promising.

The speculative methods in France are as much unlike the American as the English. There is the same fault—too much credit. There is no such thing as a margin call. If you have a trade away off in November-February, and it gets \$100,000 in your favor and against the other fellow, you must sit on your haunches and wait with as much patience as the Lord has given you. You cannot call a margin. The substantial men feel the severity, of course, more than the "thin" operators. Its a famous system for "plunges;" and crashes, although perhaps no more frequent over here, are a great deal more disastrous than in the United States. Very little is done at Paris in wheat, although it sends a very large business to Chicago. Paris on the other hand, trades vastly more in flour than Chicago; and is, in fact, the only great option trading flour market in the world.—*Ez*.

"The essential fact of the situation," writes Consul Mason of Marseilles, "is that the quantity of the French wheat crop of the year cannot exceed 90,000,000 hectoliters, which will leave a deficiency of 28,000,000 hectoliters, or about 79,520,000 bushels, to be supplied by importation." It is thought that there will be a demand for a greater quantity even than this, because the crop was short last year and the high duty on wheat checked importations, so that the stocks on hand are very low. Undoubtedly the demand would be greater but for the heavy duty, which will force people to economize. The law of March 25, 1887, advanced the duty from 3 to 5 francs per cental. It contains a provision that in case of any extraordinary crisis the president of the republic may, by proclamation, reduce or abate entirely during a stated period the duties which it imposes. Consul Mason says there is a rumor current that the cabinet will advise that this step be taken. But he is not able to learn that the rumor has any substantial foundation, and he thinks it extremely improbable that the French Government, in the presence of the distressed condition of agriculture, will abolish a duty which, besides producing a large revenue, will give French wheat growers 25 per cent. more for their product than they could get without it. Russia, Mr. Mason says, has a large and excellent crop, but dealers in Black Sea ports understand the situation perfectly

and are holding on for higher prices. All this is encouraging to American farmers.

### HARVESTING GRAIN IN CALIFORNIA.

Nearly all the work of securing the immense grain and hay crops of California is done by machinery. The ingenuity of man has been taxed to derive means to do away with manual labor so that, comparatively, but little is needed. The same may be said of harvesting crops.

The immense headers, with cutter bars from 12 to 16 feet in length, propelled by six to eight horses, cut from twenty to thirty acres in a day. The grain is elevated direct from the machine into header boxes on wagons driven by the side of the header. These boxes are from 16 to 20 feet in length, 5 feet across the bottom and 9 feet across the top. The side next to the header is 18 inches high, and the opposite side 5 feet; the ends slanting upward. Three wagons, drawn by four horses, are usually required to haul away the grain as fast as it is cut. In the bottom of many of the boxes, is spread a net, fastened to the lower side of the box, extending up and over the top of the higher side. As soon as the box is filled it is driven off to the stack, or "setting," as it is called, where a team is in readiness to hitch to ropes attached to the higher side of the netting when the whole load is rolled out onto the "setting." In some places a derrick is used for unloading, which lifts the entire load at once out of the box. There is a driver to each wagon but only one loader for all of them, who has a seat on the header, where he remains till the header wagon comes up. When one box is filled, the header stops for the next wagon to come up.

The team propelling the header, is in the rear of the cutter bar. The driver sits astride of a rudder lever, by which he guides the machine.

On level ground, with a 16-foot cutter bar, eight horses to propel the machine, and three header wagons to carry away the grain, forty acres are usually cut in one day. A field of wheat of this size near me was cut in one day and thrashed the next.

In one of the large valleys of the state, combined harvesters are used, which cut, thrash and sack the grain, all at the same time.

All grain is stacked here, as no barn could be built to hold the grain grown on 500 acres, this being about the average number of acres grown on ranches in the valleys. No grain is bound, the thrashers preferring not to have it bound.

The immense thrashing engines, using straw for fuel, thrash from 1,000 to 1,500 sacks and in some instances 2,000 sacks in a day, thrashing, cleaning, and sacking it at 10 to 15 cents a sack, boarding all their own hands in cook houses drawn about with the thrashers.

The grain crop in this (Salinas) valley is very heavy. I assisted a neighbor to haul forty four large loads of wheat from five acres, each load estimated to yield at least eight sacks of 100 pounds each. Much of the wheat stood 7 feet high, with heads 4 to 6 inches in length. This was the fifteenth consecutive grain crop grown on this piece of land with no fertilizers ever used.

### BOARD OF TRADE MEMBERSHIPS.

"This list looks rather larger than usual," said a board of trade man, as he glanced over the list of applications for new and transfers of old memberships. "What's the matter? Are the boys dying, failing, going out of business, or what?"

A bystander, wishing to know the true purport of the blackboard, called at the desk of an officer whom he found saying unkind things to a refractory pipe that wouldn't draw.

"Oh," said that functionary, "the list isn't so significant as many of the men down there think. Of course it is here as it is with all big corporations; there is more or less changing within the fold."

"What are the chief causes for these changes?" was asked.

"Some die financially and others naturally. Some make their pile or lose their pile and resolve to sin no more. Others, like old —, naming a pair of trousers and a coat still walking about the floor, 'simply dry up and blow away, and the testators offer for sale what's left of the personality. Then, again, many of these names simply mean a change of employes in the large houses; a concern buys a membership for somebody whom it wishes to employ on the floor, and then sells or transfers the membership when the employe is discharged."

"What are the memberships sold at now?"

"Well the value of a membership in the board fluctuates just like the value of stocks and bonds. Until they're for sale they're nominally worth the original \$10,000. But when once they're put on the market the matter is determined by supply and demand, the same as that of wheat in the pits. Occasionally memberships are a scarcity and then again something of a drug. Just now they're selling for \$1,500, but they're snapped up pretty quickly at that rate. I have seen transfers made for \$4,200, but that's about as high as they ever run."

"No, people get distorted notions of the significance of these notices. I've heard men right on the floor inquire how the board was growing, and apprehensively want to know whether there is a definite limit to the membership and how soon that limit will be reached. You just tell them for me that there is no such limitation, but that it will be a mighty long time before the membership will be any larger than it is now."



## THE LAW.

### Common Carrier.

A railroad company may be bound by special contract, but not otherwise, to transport persons or property beyond the line of its own road. A local freight agent has no authority to enter into a contract for the transportation of goods beyond the line of the company.—*G. & B. Sewing Machine Co. vs. Mo. Pacific R. R. Co., Sup. Ct. Mo.*

### Bill of Lading.

By the terms of a bill of lading certain goods were consigned to the order of the consignor, the bill was indorsed in blank, and was negotiated as security for a draft drawn by the consignor on a third person. The Supreme Court of Georgia held, in the *Boatmen's Savings Bank vs. Western & Atlantic Co.*, that a common carrier had no right to deliver the goods to such third person without the production of the bill of lading or authority from the holder thereof.

### Contract and Delivery.

It is an essential prerequisite that a deed, lease or other instrument should be understood by the parties to be completed and ready for delivery, in order to have a mere placing of it in the hands or possession of the grantee or his agent construed into a delivery. The delivery of a written contract is indispensable to its binding effect, and such delivery is not conclusively proved by showing that the placing of the paper by the alleged contracting party in the hands of the other. Delivery is a question of intent and it depends on whether the parties at the time meant it to be a delivery to take effect presently.—*Jordan vs. Davis et al., Supreme Ct. of Illinois.*

### Common Carrier.

The contract of plaintiff was with the defendant carrier for hauling the carloads of coal in question from East St. Louis to the plaintiff's yard in St. Louis, and another railway company was merely a connecting carrier employed by defendant to complete the transit. The coal was lost in the hands of the connecting carrier. Held, that plaintiff had a right of action against the defendant, with whom it had the contract. If three carriers jointly agree to perform a certain service, and through the failure of any of them the service is not performed, they are jointly and severally liable to the person for whom they undertook the service.—*Freeburg Coal Co. vs. Union R. R. and Transit Co., St. Louis Ct. of Appeals.*

### Grain Swindlers—Bona Fide.

A negotiable note for \$75 was given for fifteen bushels of Red Lyon Wheat, a price well known to be far above its value, and the further consideration of an agreement by the payee to sell for the maker thirty bushels of the wheat at \$15 per bushel on or before a day named, for which the maker was to receive his pay in notes, the payee to receive one-third for commission for selling, each purchaser of wheat to receive a similar bond, and to assist, as far as was in his power, in the sale of others, and the agreement reciting that the transaction was of a speculative character, and not based upon the real value of the grain. It was held that the consideration of said note, being a contract to further the sale of wheat at an extravagant price and to defraud others, was against public policy, and the note void. But such a note, void at common law, but not in contravention of any statute, is valid in the hands of a holder for value receiving it in the course of business before maturity, without knowledge of the transaction from which it originated, although he may have had reason to believe the note was given for an illegal consideration, as mere carelessness in not making inquiry, unless so gross as to imply bad faith, will not defeat such holder's right to recover.—*Davis vs. Seeley, Michigan Supreme Court.*

### "Bucket Shops"—Board of Trade Quotations.

In December of 1885 the "bucket-shop" war broke out in Chicago. Before then the Board of Trade furnished its quotations to an organization calling itself the New York and Chicago Grain and Stock Exchange, but the Board then cut off quotations from the Exchange and made a contract with the Western Union and the Gould Stock Telegraph Companies by which they furnished prices current to persons designated by the Board. The Board then undertook to take from the New York and Chicago Exchange its quotation ticker. The Exchange secured a preliminary injunction preventing this, and on the final hearing of the case the injunction was dissolved and the Exchange's suit was dismissed. The Exchange appealed to the Appellate Court, which last week decided against the bucket shops. The opinion is by Judge Garnett. He said this question was presented: "Has the Board of Trade of the city of Chicago the right to collect the market quotations through its employees and send them to the telegraph offices as private dispatches intended for persons named as its correspondents, such action being in effect a suppression of the quotations from those who are

not correspondents." He answered that the Board had this right. "The Board of Trade was organized as a private corporation in 1859, and has continuously conducted its affairs for the benefit of its members only, having no pecuniary interest in the operations taking place on its exchange. Its charter is framed in the form of an ordinary private corporation in whose affairs no one is especially interested except its own members. \* \* \* It has the right to collect the market quotations or refuse to do so. Having chosen to procure this information, it may dispose of it as its board of directors may order. The members being charged with the expense, should, in all fairness, have the advantage of controlling its distribution."—*New York and Chicago Grain and Stock Exchange vs. Chicago Board of Trade.*

## WATERWAYS

Six hundred thousand Frenchmen own shares in the Panama Canal.

Victor Brocca, an Italian engineer, has completed the survey of a proposed canal across Italy, from near Castro, on the Tyrrhenian Sea, to Fano, on the Adriatic. It will be 180 miles long, if it is ever built, and will cost \$100,000,000.

The cost of carrying a bushel of wheat from Chicago to New York in 1870 was: By lake and canal, 17.10 cents; by lake and rail, 22 cents; all rail, 33.3 cents. In 1887, by lake and canal, 8.21 cents; by lake and rail, 13 cents; all rail, 16.3.

The steamer Bulgaria took from Detroit this month the largest cargo of grain ever shipped from that city. It consisted of 87,000 bushels of wheat, loaded from the Union Elevator and was shipped by the Sherman Waldron Grain Co. of Detroit.

The Chicago Board of Marine Underwriters has fixed trip rates on grain for September as follows: To ports on Lake Michigan, 40 cents; on Lake Superior, 50 cents; on Lake Huron, Sarnia and Detroit River, 35 cents; on Georgian Bay, 40 cents; on Lake Erie, 40 cents; on Lake Ontario, Ogdensburg, 55 cents; Montreal, 70 cents. The advance is 15 cents on Lake Erie ports, 20 cents on Lake Ontario, and 10 cents on Georgian Bay.

Legal measures have been ordered to declare the old Wabash and Erie Canal, which runs through the business part of Wabash, Ind., a nuisance. The canal, which has been used as a dump for sewage and garbage, has been dry for ten days. The stench is frightful and an epidemic is feared. The owners, the Evansville, Fort Wayne & Chicago Railway Company, refuse to repair the dam at Lagro, which would cause the canal to fill with water.

The third International Congress of Inland Navigation was opened recently at Frankfort-on-the-Main. The two preceding congresses were held at Brussels in 1885 and at Vienna in 1886. The principal European governments sent official representatives. A speech by the president of the congress, who is the German Minister of State, was an argument tending to prove that railways and canals were not enemies. He claimed that there should be co-operation and not war between them. The utility of ship and barge canals was discussed, as were also the advantages of the former over the latter where there is a manufacturing district to serve, and the rates of freight to seaports as compared with rates to interior ports. The necessity of obtaining full and accurate statistics in reference to canal traffic was emphasized, and a committee to obtain these facts was appointed, to report at the next session of the congress.

There is nothing alarming in this depression in canal business. The railroads certainly have not benefited by it. Commissioner Fink, the greatest living railroad expert, said in our hearing a few days ago that railroads could not carry grain from Buffalo to New York for less than 6 cents a bushel and make a profit. The fact that the railroads carried so much grain at the commencement of this season only corroborates our previous statement that the railroads, since navigation opened, have carried grain to New York at an absolute loss. Much of the grain carried by the canal is, in fact, railroad grain, and the railroads could half empty Buffalo of the wheat and corn now lying there if they so desired. Is it not one of the strongest arguments for the retention and improvement of the canals when even railroad men are compelled to send their grain by water, simply because they cannot afford to send it by rail?—*Canal Advocate.*

In support of the proposal to dredge the Rideau Canal to a navigable depth of eight or ten feet it is contended that not only would the shipping facilities be improved and Ottawa afforded additional advantages as regards freight rates, but a large area of valuable lands now covered by water would be reclaimed and made arable. The series of dams which had to be constructed to provide water for the canal formed large, shallow lakes at various points along the route, and as the owners of these drowned lands were compensated by the Imperial authorities at the time the canal was built, it is contended that the lands if reclaimed will belong to the Dominion Government and that the proceeds of their sale would go far to cover the cost of deepening the canal. The dredging of the Rideau, it is alleged, would draw off the water from the shallow

lakes, leaving the present "drowned lands" high and dry. The deepening of the canal, including the enlargement of the locks here, would be a very expensive undertaking.

The Buffalo Commercial Advertiser prints the following exhibit of the average rate paid on wheat from Chicago to Buffalo by lake, and the average on the same cereal from Buffalo to New York by canal for the month of July in the years named:

During July.	Lake		Canal	
	Wheat.	Corn.	Wheat.	Corn.
1888.....	2.0c.	1.7c.	2.3c.	2.1c.
1887.....	3.8	3.5	3.8	3.5
1886.....	2.7	2.5	4.0	3.6
1885.....	1.3	1.1	3.0	2.8
1884.....	1.9	1.7	3.6	3.2
1883.....	2.5	2.3	3.9	3.6
1882.....	1.9	1.7	4.4	4.0
1881.....	2.6	2.2	4.3	3.8
1880.....	4.8	4.3	6.0	5.4
1879.....	2.5	2.3	5.2	4.7
1878.....	1.7	1.5	4.3	3.8
1877.....	2.6	2.2	5.4	4.7
1876.....	1.9	1.3	5.9	5.4

These averages, although very low, are not so low as those for some preceding years, nor so low by lake as those in June. From the opening of navigation this season to the close of last month business by lake and canal was very dull, and as a result rates ruled abnormally low.

Capt. M. De Puy writes as follows to the New York Commercial Bulletin: "In May and June when the Erie boatmen were freighting oats for 1½, corn 1½, and wheat for 1½ cents a bushel from Buffalo to New York, the advertised rates on grain by rail were 13 cents per 100 lbs. Please note the difference between the rail and canal routes. Thirteen cents per 100 lbs. equals about 8 cents a bushel on wheat, 7 on corn, and 4 on oats. But it is well known that railroad companies are very flexible. Although some of their officers are millionaires, they do not hesitate to cut advertised rates in halves, quarters and eighths and sometimes have discounted the entire advertised rate when closely pressed by the Erie boatmen. Last season it came to light that the Pennsylvania Railroad Company were not making any charge for transferring grain from cars to ships in the port of New York, although the standard rates for the identical service on canal grain was 1½ cents per bushel. Like the last straw which broke the camel's back, so the act of the Pennsylvania Railroad Company opened the eyes of the directors of the Erie Canal, and last winter, while at Albany, they enacted a law fixing a liberal rate for transferring canal grain. However, the law is ignored at present, and the railroad elevator monopoly, which lays over the Standard Oil monopoly for wealth, proposes to trot the law through the entire routine of courts in hopes of finding judges that will sustain them in bleeding canal grain to the extent of one to three million dollars per annum, according to the amount of grain shipped by the people's free waterways. From a financial standpoint this, to the people of the United States, is the most important suit which ever came before American jurists. It is virtually to test whether the railroad companies shall be permitted to continue to monopolize not only the free canals of the state of New York, but the entire chain of lakes as well, by levying excessive transfer charges on canal grain at the ports of Buffalo and New York."

### "OLD HUTCH" AND HIS CHAIR.

In the shadow of one of the huge pillars which support the roof of the Board of Trade Building has been placed a large, stout chair, which "Old Hutch" considers his especial property. He brought it over from the Century Club one day a few weeks ago. He likes that part of the building, and he is not always certain of securing one of the folding seats attached to the wall in that vicinity. He is too restless to long remain seated, and will suddenly spring out of the chair as quickly as he sat down in it and walk the floor with that nervous, awkward stride so peculiar to him. Every one on the floor knows that this is Hutch's seat, and few people ever sit in it even for a moment, though some of the old boys drop into it just to cross him. A short while ago a big, hulking fellow who has some connection with one of the elevators and occasionally comes on the floor, strolled into the Board. He does not come often enough to know many of "Hutch's" peculiarities. He sat down in the chair. Presently the old gentleman, who was in a famous bad humor, and had just dusted the jacket of his newest broker, strode up with emurpled face and flashing eyes.

"What in three-em dash are you doing in my chair, you three-em, eleven-em dashed fool, you?" he thundered. The husky usurper got up suddenly, and it seemed to the spectators that he would never finish getting up. When he straightened up he towered even over the tall speculator.

"Now, you banged, binked, blanked old idiot, what do you mean by talking to me like that? I've a good mind to smash that big nose of yours all over your face. If you ever presume to address me again without having been introduced I'll kick your spine through that rotten old skull of yours."

During these remarks the face of "Old Hutch" was a study. The observer could see that he was charmed with the speaker's attitude and his fluency of speech.

"Oh, take the chair," he said, when he found a chance to speak. "I don't care to sit down," but the other man was going down stairs.

"Hutch" never thoroughly likes a man till he finds he can defend himself.—*Chicago Times.*



## THE EXCHANGES.

Membership in the Cincinnati Chamber of Commerce sell for about \$120.

The St. Louis Merchants' Exchange has voted against repealing the corner rule.

Tickets of membership to the New York Produce Exchange have advanced to \$1,535.

The new Chamber of Commerce Building at St. Paul, will be seven stories high and 100x115 feet on the ground. The cost will be \$200,000.

Two bucket shop keepers at Montreal have been arrested and the Canadian authorities seem determined to enforce the law against them.

The elevator proprietors at Milwaukee have refused to comply with the request of the Chamber of Commerce of that city to ship out the oldest wheat in store first.

The trading hours on the New York Produce Exchange are from 10:30 A. M. to 3:45 P. M. and the general impression is that the hours are too long and should be curtailed.

The half-hour afternoon session of the Chicago Board of Trade will probably be done away with. The directors will submit to the Board a proposition to be voted on for a continuous session, closing at 1:15 P. M.

At the election of officers of the Cincinnati Chamber of Commerce, Sept. 11, about 1,230 votes were polled. The result was a mixed ticket, the successful candidates receiving generally from two to ten majority. The officers chosen were: President, Thomas H. Morrison; vice president, Richard Dymond; treasurer, William L. Hunt; secretary, Paul Williken; directors, John N. Woolcraft, A. H. McLeod, John F. Hazen, J. Walter Freiburg, William McAllister; member Real Estate Board, John Kyle (no opposition).

New York Produce Exchange Reporter: "The return to the winter hour for closing the Exchange, viz., 3:30 P. M., is a great nuisance to say the least. All the business transacted on this Exchange or all other Exchanges combined for that matter, could be accomplished in half the time. In fact, the bulk of the day's speculative business is generally over by 1 o'clock. Hence the extension from 1:15 to 3:30 P. M. is a waste of time. All the Exchanges here and West should co-operate and settle upon an earlier hour for closing that would give uniform satisfaction. Indeed, the members of the Chicago Board are now talking of discontinuing their afternoon session entirely, which would be a decided improvement.

Says the New York Produce Exchange Reporter: "The manner in which the present case against 'curb trading' was instituted at the Produce Exchange is interesting in its details, which are as follows: F. B. Howell of the firm of Howell & Charlier of the Exchange is and has been a staunch supporter of the rule against curb trading, and bemoaned the fact that it was impossible to bring the violators of the law to book, as neither of the parties to a trade would take the necessary and disagreeable steps. After the close of the Exchange on Monday the members of the firm were absent, and a clerk was left in sole charge of the office, when an order to buy wheat came in for execution. The clerk took it upon himself to fill the order, purchased on the curb from James Bingham, C. E. Wilmont and F. Cohn. Legally Howell & Charlier were responsible for the transaction, though morally innocent. Mr. Howell at once discharged the clerk who had been guilty of the act, and made a complaint before the committee against himself, giving up the names of the parties who had participated in the deal, and thus came the opportunity that had been wanted for two years."

Says the St. Louis Merchant, Miller and Manufacturer: The Merchants' Exchange is certainly composed of as large a number of the long-headed, far-seeing men as can be found in any similar body of merchants. They go along plodding the same course year after year without, it seems, ever occurring to them that they have no home or house of their own. After having paid a quarter of a million in rent, and renewing a lease agreeing to pay a quarter of a million more, with the time rapidly approaching when another lease will have to be made, unless provision is made before the expiration, they will be subject to the same imposition. After paying a half million dollars in rent and having nothing to show for this great expenditure, it seems strange that some plan cannot be formulated looking toward the purchase of ground and building thereon, which, with the vast amount of capital now on hand, would, undoubtedly, inside of ten years, leave the body with a property worth a million dollars, and no liabilities. Such would have been the case now had the matter received the attention when the large surplus fund was created. The present lease would not have been made, and \$250,000 saved. When the offer was made, and purchase suggested, of the Ferguson Block on Washington avenue, St. Charles, Ninth and Tenth streets, at a price of about half its present value, had the Ex-

change then gone before adjacent property owners, at least \$50,000 could have been raised as a bonus to induce the Exchange to buy and build. We hold now that a location can be secured for cash, a building erected, and in ten years from the expiration of the lease now running, memberships of the Exchange would be worth \$500 each, and not a dollar of indebtedness need be incurred. Make it a stock company and the stock be taken by members and surrendered at value to the body as rapidly as their funds would allow. And to this retire forever the membership of each deceased member. We feel confident plans can be formulated that would make the most independent body of merchants in this country, and that body the Merchants' Exchange of St. Louis.

## THE BARLEY CROP.

A leading grain receiving house of Chicago, after a wide and thorough investigation of the outlook for barley in the Northwest, has issued the following:

From information gathered with great care from the barley growing territory, the conclusion arrived at would be that the barley crop of the Northwest will be the largest crop of poor barley ever known. Heavy rains and dews have badly stained the product of the Northwest to such an extent that there will, from present indications, be little barley that will grade No. 2.

Nebraska has saved some barley that will grade choice No. 3 in the Chicago market, but most of it from there is light weight, though fairly good color. This state raised less than last year. Average small and yield fair.

Illinois and Iowa promise a very poor crop, light weight almost everywhere, with fairly bright barley in patches throughout these states. Quality inferior to last year's, as the barley is especially lacking in weight. Acreage and yield about same as last year.

Minnesota and Dakota have heavier barley than last year, and more of it, owing to heavier yield on slightly decreased acreage. Chinch bugs have done some damage, some sections reporting only two-thirds crop. Barley suffered badly from wet weather during harvest, probably more in this than in any other territory, and much of it is so badly damaged as to be almost unfit for malting.

Wisconsin has larger acreage and heavier yield than last year, generally heavier weight, but barley badly stained. There will be a small percentage of good barley from this state, but at this writing we have seen none good enough for No. 2. There will be a large crop of good quality of Pacific coast barley, and if prices are high here that section will prove a strong competitor in this market.

The winter barley district has raised some good barley, but only about half a crop, owing to early frosts. New York state and Canada report a large crop of better quality than last year. Shippers will have to be more than ordinarily careful in making purchases on account of damp condition of barley generally. It would be advisable to hold back shipments until the barley has been through the sweat, but where this is not feasible, rush shipments through after thorough handling, and ship only dryest barley, so as to run the least possible risk of having barley arrive out of condition.

## A EULOGY ON CORN.

It has been said that Chicago was built and rebuilt by corn. It may also be said that many of her best citizens are corn-made men. The bone and sinew of Chicago business life are from Western corn fields. The barefoot boy dropped the four seed kernels into the cross made by the marker and begrudged the hired man the sturdier business of covering them with a hoe. He put on boots and manipulated the hoe, burning with envy of the youth with down on his lips who drove the marker. Then he drove the marker himself, rode the two-horse cultivator or long daily crusades against weeds, and husked fifty bushels in a day on a wager with the hired man, who could only place forty-eight to his credit. He is a progressive youth, and suddenly discovers that the end of corn is not to be husked and taken to market, but that that is really the beginning; that its future career is to build railroads and cities and colossal fortunes. So the youth throws down his hoe, abjures the cultivator, pulls off his husking gloves, and arrives in Chicago, a subject of King Corn. You see him now every day. He is a director of the Board of Trade, and is worth half a million. Corn did it. He is a pork packer, and can break a bank. It is corn that did it, for without corn there would have been no pork to pack. He is a wholesale grocer, dry goods, clothing, lumber, iron, agricultural implement merchant, and lives like a prince; and corn did it, for but for corn there would have been nothing to receive in return for his goods. The streets are paved with corn.

These corn-made men and this corn made city are as much to the endless Western corn fields as the corn fields are to them. No amount of improvement of the waterways, supplemented by the puny railway enterprises of a New Orleans, a St. Louis, and a Kansas City, could provide for the marketing of the annual product of this 72,392,720-acre American corn field. So Chicago became a necessity to corn as corn is now a necessity to Chicago. Her lines of railroad, radiating in all directions, like long spokes of an immense wheel, penetrate every portion of the big corn field. They are like huge arteries in the winter and spring, transmitting a warm life current, which returns in the fall through the main flood-gate at

the foot of Lake Michigan, a deluge of plenty that reaches every part of the world.

One billion four hundred and fifty six million one hundred thousand bushels of corn in 1887; value received, \$646,000,000! This year there will be 100,000,000 bushels more at the least, and people at home and abroad are crying for it. Corn is a pure type of democracy; it has none of the effete aristocratic whims and privileges of wheat. It is for the masses, and the masses are for corn—a more popular monarch never reigned. Think of his generosity! This year the train which conveys his gifts to his subjects, and will pass through Chicago, will contain nearly 3,000,000 cars, each loaded to the brim. This train will be hauled by 50,000 locomotives, and will reach around the globe. So heavily loaded a train must needs travel slowly; it will require a whole year in which to pass through Chicago. And it will stop over here longer than anywhere else. The engines will water and coal up here, and several million bushels will be thrown off for the use of citizens; for even the butcher, the baker, and the candlestickmaker of Chicago have contributed to the glory of King Corn.

One of the chief delights of the man who, as a youth, abandoned the hoe and the two-horse cultivator to come here and help build Chicago—for, as has already been intimated, they are the men who build the fastest and strongest—is to make a flying visit through the big corn field at this season of the year. It is a duty as well as a pleasure. His practiced eye can tell at a glance whether the yield will be large or small, and not all the momentous questions of the Government are of such weighty importance as a foreknowledge regarding the yield of corn. Yet, as the train whirls him past mile after mile of the triumphant, gracefully waving plant, its utility is apt to be forgotten. No country or climate can match the view unrolled before him. An Iowa corn field is a panorama without a blemish. The exhausted soil of the Eastern states yields a grudging store of "nubbins," and the stunted stalk bends beneath the disgrace of its fallen estate. For two hours the express train whirls past an Iowa green ocean of corn, wherein not a hill is missing. Its towering stalks would afford secure ambush for an army of 1,000,000 men, mounted and foot—artillery, ambulances, mule trains and stragglers; every maturing ear—and there are two to the stalk and four stalks to the hill—is a foot in length, and has a lustrous fringe of brown silken whiskers, sprayed with yellow pollen. The ignominious name of "nubbins" is unknown in the land.

## WHEAT AND FLOUR EXPORTS SINCE 1820.

EXPORTS OF WHEAT AND FLOUR FROM THE UNITED STATES.  
(Flour reduced to bushels in the total.)

Five fiscal years ended	Wheat. Bushels.	Flour. Barrels.	Total Bushels.	Per ct. of total.
1825.....	72,874	4,451,384	18,878,410	97.61
1830.....	125,547	4,651,940	23,385,247	99.46
1835.....	614,145	5,241,964	26,823,965	98.2
1840.....	1,842,841	4,092,932	22,307,501	91.7
1845.....	2,946,861	6,274,697	34,320,346	91.1
1850.....	10,184,645	12,284,828	71,608,785	85.77
1855.....	16,446,955	13,149,518	82,194,545	79.9
1860.....	38,808,573	15,778,268	117,699,913	67.
1865.....	138,806,907	19,757,733	237,095,572	42.9
1870.....	81,808,364	11,454,785	139,082,289	41.2
1875.....	224,019,376	16,797,684	308,007,796	27.2
Total for 55 years.....	515,177,088	113,935,733	1,081,404,369	52.6
Fiscal year.				
1876.....	55,073,122	3,935,512	74,750,632	26.32
1877.....	40,325,611	3,343,665	57,044,936	29.30
1878.....	72,404,961	3,946,855	92,139,256	21.42
1879.....	122,353,936	5,629,814	147,687,649	17.1
1880.....	153,252,795	6,011,419	180,754,180	15.2
1881.....	150,565,477	7,945,786	186,326,464	18.9
1882.....	92,857,376	5,733,194	110,656,649	21.7
1883.....	106,385,828	9,205,664	147,811,816	28.2
1884.....	70,349,012	9,152,260	111,534,182	36.9
1885.....	82,449,014	10,347,629	128,993,344	36.
1886.....	57,750,609	8,179,231	94,557,149	37.1
1887.....	100,809,212	11,328,872	151,789,136	33.5
1888.....	63,846,204	11,746,028	116,703,330	45.2
Total for 13 years....	1,078,423,857	96,605,829	1,608,742,253	27.0
Grand total since 1820.....	1,593,600,945	210,541,562	2,690,146,622	.....

These figures show that the exports of flour for the last fiscal year were the largest on record, reaching 11,746,028 barrels—a gain of 400,000 barrels compared with the preceding year, and of 2,500,000 barrels compared with the year ending June 30, 1886. Of wheat, however, the shipments were the smallest since 1878 with one exception. Since 1880 there has been a gradual upward movement in the percentage of flour to the total exports of wheat and flour combined, and while in that year the percentage was only 15.2, in the year just closed it was 45.2. This is an exceedingly gratifying condition of affairs. Instead of exporting so small a proportion of flour, we are now steadily increasing, thus giving American millers the benefit of this expanding trade. Nearly one-half of all the wheat exports of the country now goes in the shape of flour. The gain has been remarkably rapid.

In thirteen years, or since 1876, we have exported from this country over 1,000,000,000 bushels of wheat and 96,600,000 barrels of flour; the aggregate value of the two being \$1,797,267,367, while for the preceding fifty-five years we exported 515,177,088 bushels wheat and 113,935,000 barrels of flour, the aggregate value being \$1,412,000,000.—Baltimore Journal of Commerce.



## Press Comment.

### PRESERVE THE WATERWAYS.

The subject of water communication is still receiving a great deal of consideration in England. The railway charges for freight between points not connected by waterways are held to be exorbitant, and water communication is believed to be the only way of checking the greed of the railway corporations. There does not appear to be much difference in this respect between England and the United States, as any one having occasion to ship goods between New York and points up the Hudson River in summer and winter has learned by practical experience. The waterways should be preserved and improved by all means.—*American Machinist*

### SLIGHTLY SARCASTIC.

Mr. Leopold Bloom made \$15,000 in twenty-four hours by a drop of 1½ cents in December wheat. If Mr. Bloom were a first-class mechanic and could save \$1,000 a year above the cost of his living and that of his family, it would take him fifteen years to acquire this sum of money. But Mr. Bloom made it in one day, which goes to show that he is at least forty-five thousand times as intelligent and valuable as the mechanic who got wages good enough to save \$1,000 a year. And yet there are folk who are enthusiastic over the manual training schools. What the country really needs is Board of Trade training schools, where the youth of the country can be instructed in the improved methods of to-day in the creation of wealth.—*Chicago News*.

### A BRITISH VIEW.

It appears to be pretty clear that the supplies of the year are not likely to be equal to the requirements, and that a call will be made upon the reserve stocks of the United States, Russia and India. Whether these supplies will be sufficient to meet requirements without seriously disturbing the market remains to be seen. In the meantime prices are advancing. Harvest prospects in this country are by no means good. It is already certain that the 1888 crop of home grown wheat cannot come into the market in good milling condition. September is now upon us with its long, damp, cold, foggy nights and short hours of sunshine; so that, however fine the autumn may be, there cannot, presumably, be many really dry wheats sent to market. It is this factor in the position which has enhanced values during the past week or two, and which, for a time, will probably cause them to go still higher.—*The British Trade Journal*

### THE CANAL TOLLS CASE.

It is not necessary for us to comment upon Mr. McDougall's contention that the Ottawa government has refused to the states "equality" in the use of Canadian canals. The *Globe* has already counseled the administration to free the canals or abandon the rebate which is granted alike to Canadian and American vessels passing through the St. Lawrence after having passed through the Welland. It would be easy enough to maintain that there is no denial of "equality" to United States vessels. But there is a discrimination, which is anything but prudent, in favor of Canadian ports. Perhaps few who remember how the rebate came to be granted will think that any tricky evasion of the Treaty of Washington was intended, but discrimination against Oswego certainly was. To stand out against an American demand which does not involve more than a trifle cannot be judicious. The peculiarity of their demands in the fisheries business is that to concede them would be tantamount to surrendering our inshore fisheries in return for no compensation or friendly return whatever. That, at least, is the contention of the government. It has always been supported by the *Globe*, and we have yet to see any forcible argument the other way.—*Toronto Globe*.

### WHEAT PROSPECTS.

It is neither possible nor desirable to conceal the fact that the wheat crop of a considerable portion of the Northwest has suffered serious injury. There was, three weeks ago, an apparently assured prospect that the yield of this year would be, both as to quantity and quality, the best in our history. That prospect has been changed only in as far as the crop was affected by the heavy frosts of the middle of August. This frost, unfortunately, found a portion of the crop in the extreme northern counties of Dakota not yet past the stage where it might receive damage. But fortunately it was only a minor fraction that was so deteriorated. What proportion of the whole yield this will amount to has yet to be determined. Over a small area the loss is general and heavy. It does not, however, touch the southern and central sections of Minnesota and Dakota at all, nor is it operative in the Red River Valley, or along the main line of the Northern Pacific. From all these sections come reports of splendid crops, the grain not only turning out well to the acre, but grading very high. Meantime prices continue to maintain the strength recently acquired. Advices from abroad are still uniformly and almost suspiciously unfavorable. It is not, however, permissible to question the general conclusion, reached by the best experts on the subject, that the foreign shortage is great, and that the demand for wheat will show larger, over against supply, than it has done for six or eight years past. This is the main factor, compared with which any crop injuries in the

Northwest are a trifle. As far as the Northwest is concerned, while the frost damages will bear hardly upon particular localities, it is gratifying to know that the advance in price is already sufficient to counterbalance to some extent the losses in quantity.—*Pioneer Press*.

### THE GREAT WATERWAY.

The scheme that has been long under consideration in this and adjacent states, and which has been submitted to Congress, for the construction of a ship canal connecting our great lakes with the waters of the Illinois and the Mississippi rivers, and thence to the Gulf of Mexico, is in design and object the same as those of the projected Manchester and Birmingham ship canals in England. The purpose is the establishment of a great channel for steamer navigation which, while affording to the producers, merchants and consumers of our vast lake region and the Mississippi valley direct and expeditious access to the markets of the world, would at the same time insure cheaper cost of transportation and operate as a regulator of railway freight charges. This lake-river-canal transportation project is feasible, and its value and importance to the country, to the government, and to the interests of production and commerce are self-evident.—*Chicago Evening Journal*.

### AVERAGE VALUE OF WHEAT.

In the table given in this issue, showing the exports of wheat and the average value per bushel since 1825, it will be seen that the lowest average value touched in sixty-eight years was for the twelve months ended June 30, 1888. The average of all wheat exported during that year was only 81 cents a bushel, against 86 cents in 1885, the next lowest year. Prior to 1886 the average had never been as low as \$1.10, even since 1850, with two exceptions, 1879 and 1884, when the price was \$1.06. For the five years ended June 30, 1870, the average was \$1.43 a bushel, the highest for any similar length of time since this country first commenced exporting wheat. In 1876 the average was \$1.24, dropping in 1877 to \$1.16, and again rising in 1878 to \$1.33. Since then there have been some considerable fluctuations from year to year, with the tendency gradually downward, until, as we have already said, the lowest point of 81 cents per bushel was reached last year. With a short crop this year, both in the United States and in Europe, wheat is now very much higher than at the corresponding time of last year, and it would seem that a much higher average must be maintained than we have had for several years. The world will need all the wheat we can spare, and willingly or unwillingly it will doubtless pay good prices for it.—*Baltimore Journal of Commerce*.

### ELEVATOR LEGISLATION IN NEW YORK.

It would seem that the elevator law which was passed last session is working smoothly, notwithstanding the carping of critics and the fears and fearful prophecies of some of our Buffalo friends who opposed the measure. The law is, of course, evaded, but it will be an easy matter to have it amended at the next session of the legislature, and so have the act executed in its fullest sense. This, we understand, is the intention of some of the friends of the measure. It will not be difficult, for example, to so amend the ambiguous clauses that no "evening up" or dodging can further rob them of their true legal intent. What the courts may do on the constitutional question is another matter. Our opinion is that the act will prove to be constitutional, for although one or two judges of pliable minds or warped judgments may upset last session's work, the court of last resort will undoubtedly justify the legality of the act. It is remarkable that this elevator law is the only enactment passed in recent years where honest labor has conquered unlimited capital. But the people have been educated on these canal abuses, and they know it is disastrous folly to submit tamely to them. There are lots of festering spots left yet. It is only a question of time when they will be rooted out with the keen legislative lance which our Albany solons are compelled sometimes to use against their will.—*Canal Advocate*.

### WHEAT PRICES.

It is satisfactory to know that whatever the future course of the market, the ruling price of wheat throughout the Northwest at the beginning of marketing the new crop is very considerably higher than it was a year ago. Nor, though anticipations of old-fashioned prices may be doomed to disappointment, is it probable that prices now prevailing will be materially lowered. The cash value of wheat at the elevator is still far below what we should like to see it. But it is enough above that of the same time last year to fill the farmer with encouragement. An addition of from one-fourth to one-fifth in his receipts per bushel means a great deal to him. It means the difference between profit and loss; the difference between pinching economy in order to make both ends meet, and a surplus for the year that will be a welcome relief. A rise of fifteen, or ten, or even five, cents per bushel in the value of wheat at the elevator, when applied to the vast crop of the Northwest, makes a total difference in the value of the crop and in the farmer's earnings which will mark the difference between prosperity and depression. It is not at all probable that there will be any crop shortage so considerable as to equalize this change in prices, and deprive the farmer in the end of all benefit from a rising market. He is already well assured of a price for his grain that will leave him something over the cost of production. And better wheat prices mean increase of population, of wealth and of general prosperity over

every square rood of territory, country and city throughout the whole empire of the Northwest.—*St. Paul Pioneer Press*.

### WATERWAYS AND RAILWAYS.

It is, in the long run, no disadvantage to a railroad to have even severe water competition; the situation of many of our most thriving railroads confirms this view. If this be the true view to take of the establishment or maintenance of connecting waterways, it follows that the opposition to them on the part of our transportation men is not dictated by a far-sighted policy, and their evident distrust of the first effects of water competition should be allowed only its due weight in considering the enlarging of our water system. What will benefit the manufacturer and dealer will in the end benefit the carrier also. Here, too, appears the error in allowing the railroads to buy up and abandon or but partly use their competing canals. The Pennsylvania Railroad has followed English precedent in this respect, as we think to its own detriment as well as to that of towns and cities interested. At least no more of our waterways should pass into railroad control without carefully guarded provisions as to operation. This, then, is the justification for the spending of money by the government, either state or national, upon improved and cheaper means of transportation. It is a public work which, if done in reason and with a wise policy, must inure to the benefit of all our interests, our railways being included.—*The Iron Age*.

### WHEAT AND CHESS.

Below we give briefly the causes which have led to differing opinions, and induced some farmers to suppose erroneously that wheat may turn to chess. 1. There are countries where wheat is raised, but where chess is entirely unknown, this plant not having been introduced there; and, consequently, when wheat is winter-killed no chess follows. We have known some farmers who have succeeded in entirely eradicating it from their farms, and we could never find a grain of chess on a rigid examination of their grain; yet their wheat was sometimes winter-killed. 2. Chess is stunted and rendered invisible to superficial observers when densely shaded with a heavy growth of wheat, in some instances ripening seed when the plants were only two inches high. But where the wheat was killed from any cause, the chess plants have sprung up three feet high in the space thus made for them, and borne thousands of seeds. 3. Wheat and chess are two entirely distinct genera of plants, wheat being a *Triticum* and chess a *Bromus*, which are so unlike that one cannot change to the other, any more than a wild cherry can change to a choke pear. No instance has ever been known where plants of one genus have changed to those of another, and if it could take place the vegetable creation would soon become a mass of inextricable confusion. 4. Some years ago one of the editors of the *Country Gentleman* offered \$500 for three months to any one who would produce a plant part way changed from wheat to chess, on the ground that if such changes were constantly taking place, a single plant might be found in a transitive condition among the countless millions all over the country. But not a single claimant applied, in the face of a smaller penalty in case of failure or attempted imposition. 5. The before-mentioned causes show how easily inaccurate observers have been misled in this matter. The seed of chess is easily scattered into soil by inconspicuous growth in manure, in seed not wholly clean, and in other ways. The adoption of the error has deterred some farmers from taking sufficient pains to clear their land of this weed, as others, more careful, have successfully done.

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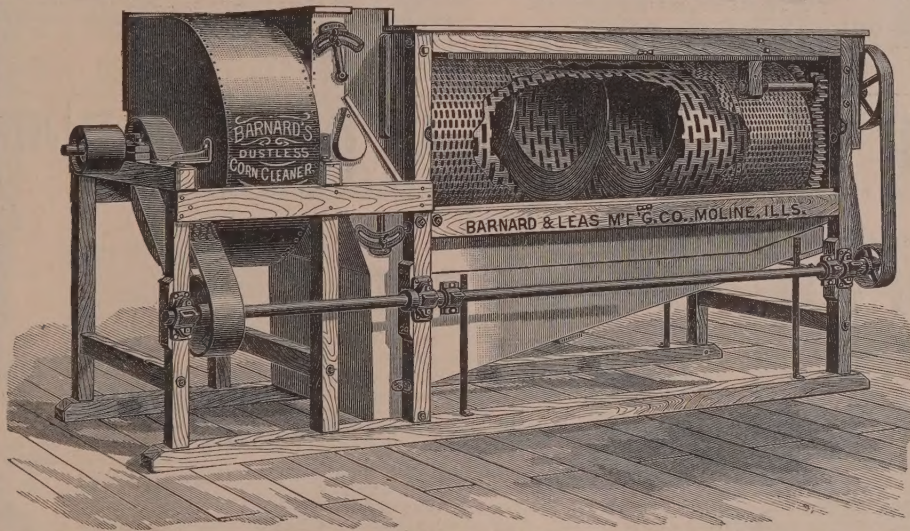
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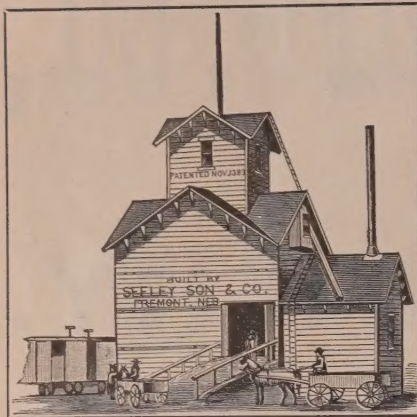


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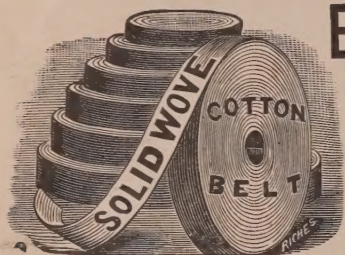
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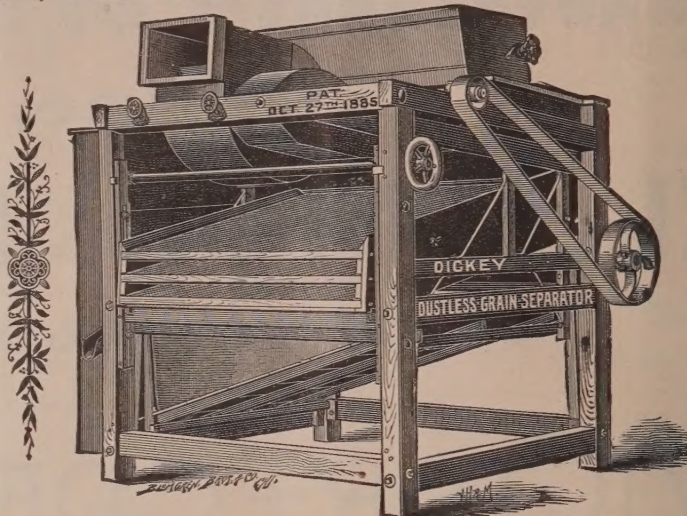
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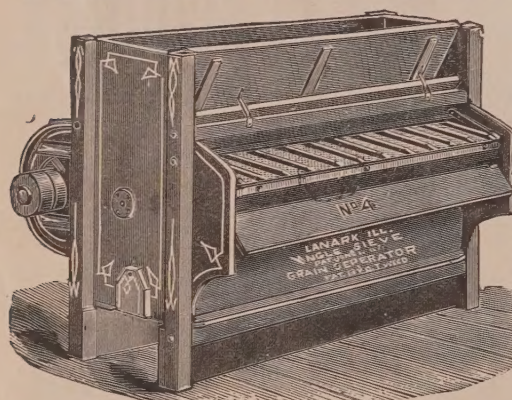
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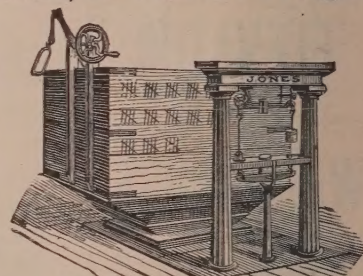
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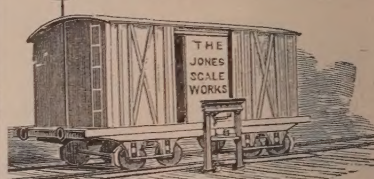
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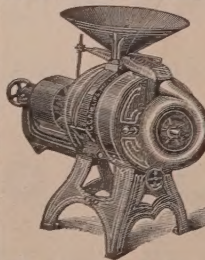
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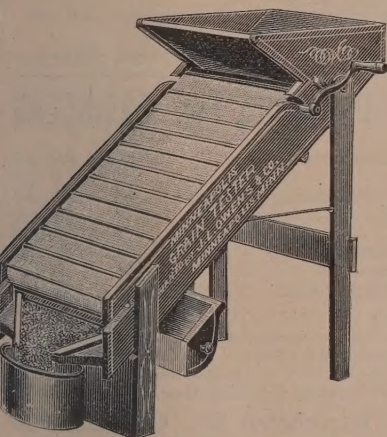
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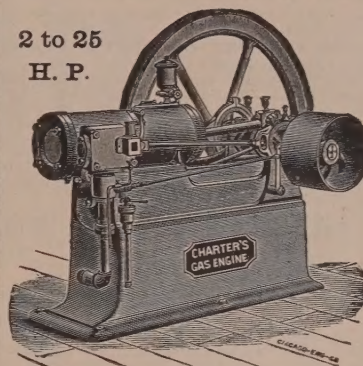
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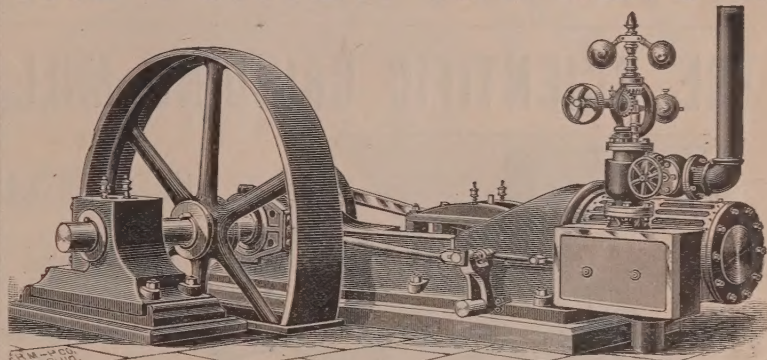
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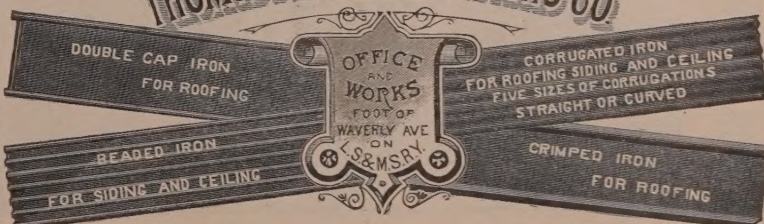
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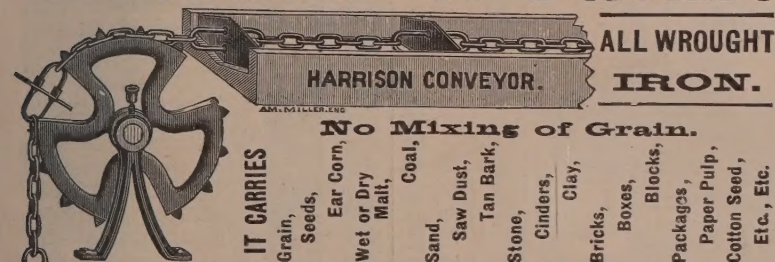
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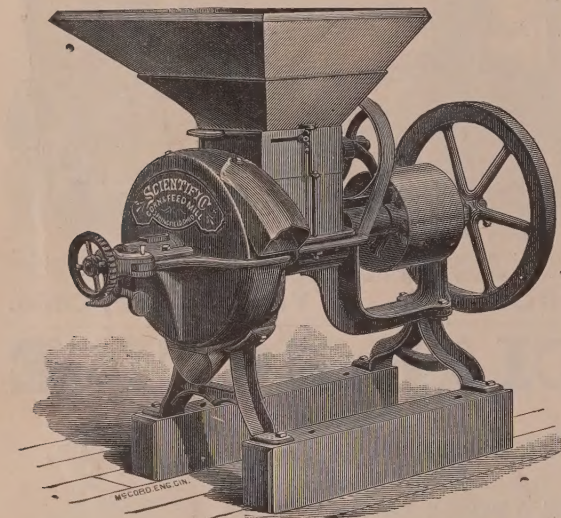
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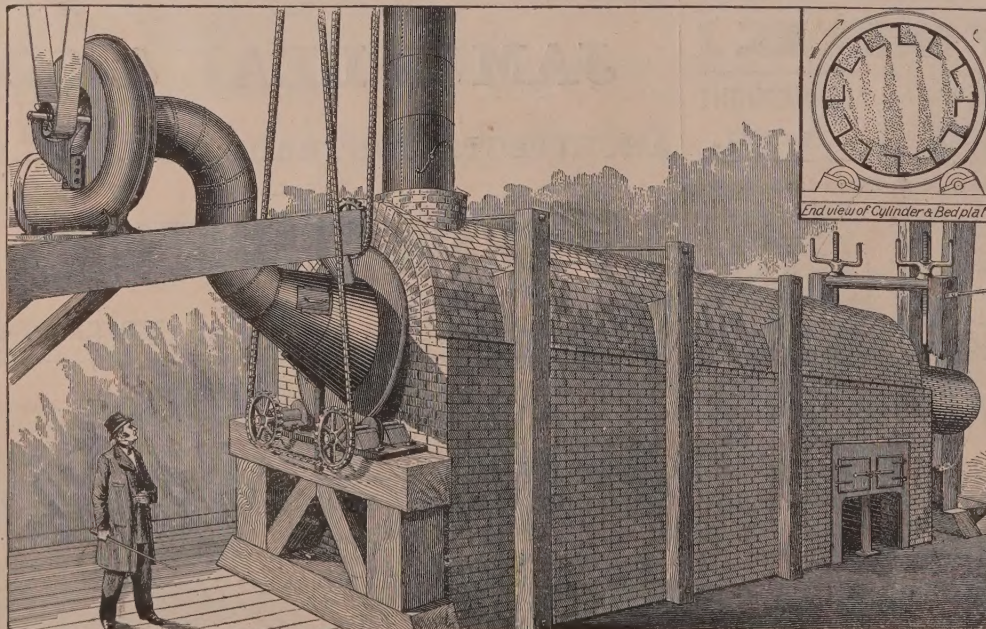
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